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TWO CASES OF CHRONIC PEMPHIGUS.

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WITH NOTES OF THE BACTERIOLOGICAL FINDINGS.

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CASE 1.—Boy, aged 3 years. Admitted under me into the Jenny Lind Hospital for Children on October the 7th, 1908. He is one of three healthy children; the father and mother are healthy and have not lost any children. He lives in the country, and Dr. Sturdee, of Walsingham, who sent the child in, kindly sent me the following notes of the onset of the disease: "First seen on May the 10th, 1908. Feverish and had been sick—quite well two days ago. Throat injected; tonsils swollen; follicles plugged. Scarlatiniform rash over body. Scarlatina prevalent in the village; diagnosis scarlatina. May the 13th: Child better in himself. Rash present over lower extremities. In the groins and popliteal spaces were several large blebs. May the 16th: Better. May the 21st: Some sore places, like vaccination spots, on thighs. May the 25th: Peeling. Fresh blebs have appeared from time to time."

The boy's general health got quite right, but he continued to have fresh crops of vesicles from time to time, many of which became purulent and caused him a good deal of discomfort, until his admission. Condition on admission: He is well nourished and developed. The skin over the legs, thighs, genitals, buttocks, arms, part of the face, and back of the head is covered with blebs, many of which have become pustular. They are all small, only few being larger than a shilling piece. There is nothing else abnormal about the child. Temperature 99° F.; pulse-rate 100. Treatment: Boracic bath twice a day, four-hourly boracic fomentations, liquor arsenicalis *mj t.d.s.*

On October the 27th Dr. Claridge obtained a pure culture of *Staphylococcus albus* from a bleb.

November the 9th.—Some fresh blebs have appeared during the last fourteen days, but he is much better. One hundred million dead staphylococci from a stock vaccine injected.

November the 14th.—Fresh spots.

November the 15th.—Temperature 101° F.

November the 17th.—Temperature normal; copious vesicular rash over thighs.

November the 20th.—Complains of abdominal pain; rash clearing up. Fifty million staphylococci injected.

November the 23rd.—Culture taken from a fresh bleb and an organism identical with that found in Case 2 obtained.

Until January the 21st, 1909, when he was discharged, fresh blebs appeared, generally in crops, but they were not so numerous as before, and the careful protection of them by antiseptic dressings prevented secondary infection by pyogenic organisms to any great extent. The arsenic was gradually increased until he was taking 15 minims of the liquor *per diem*. In June, 1909, Dr. Sturdee reported that the boy had been better on the whole, the blebs being neither so numerous nor so large.

CASE 2.—Girl, aged 6 years. Parents both healthy; they have three children living and one died of diarrhœa. The present disease began when she was two years old, the rash appearing first on the legs. She has been frequently in the Jenny Lind and Norfolk and Norwich Hospitals for this disease, otherwise she has enjoyed good health. The appearance of the blebs is often preceded by a rise in temperature to 102° and 103° F. which occurs suddenly about twenty-four to forty-eight hours before the eruption and is attended by some constitutional disturbance. Practically all

her skin except the scalp has been affected at different times, though the lower extremities and genitals are the favourite sites. Some of the blebs are an inch across and hæmorrhages occasionally occur into them. Unless carefully treated they quickly become purulent, and her general health has in consequence been sometimes seriously affected.

She is well grown and nourished and usually eats heartily. Boracic baths and fomentations combined with arsenic internally have proved the least unsatisfactory form of treatment.

During her stay in the Jenny Lind Hospital this year Dr. Claridge took cultures from the blebs, and has kindly furnished me with the following report:

"Fluid from a bleb twenty-four hours old contained pus and *Staphylococcus albus* and an organism growing in minute colonies. A pure culture of this latter was afterwards obtained from a three hours' bleb which contained clear fluid and no pus-cells.

"This organism grown on agar formed circular translucent colonies .1 to .15 mm. in diameter.

"On gelatin at 20° it grew with the same characteristics.

"Stabs into agar and gelatin gave a growth along the whole line of the stab. In broth there was at first an even turbidity. After several days clumps of organisms were seen at the bottom of the tube. No more vigorous growth could be obtained on blood agar or hydrocele fluid agar. Microscopically the organism was a coccus, growing mostly in pairs, but in places in short chains up to six or eight. These took Gram's stain, but some were easily decolorised."

A vaccine was prepared by Dr. Claridge from this organism and the child given three doses of it at intervals. The effect was to raise her index above normal for two or three days only.

The injections had no influence on the disease, possibly because, as Dr. Claridge thinks, they were not large enough, and the child was lost sight of for some months.

Both these cases were clinically typical examples of chronic pemphigus, the cause of which has been ascribed by some to a faulty nervous system, by others to an infection with micro-organisms.

I regret that I was not able to give both these children a thorough treatment with the vaccine made by Dr. Claridge, for had a successful result followed it would have definitely established the "septic" nature of the disease.

That the treatment with a staphylococcal vaccine had no effect is scarcely to be wondered at, since Dr. Claridge's investigations

show that the infection with staphylococci does not occur until some hours after the appearance of the vesicle.

The coccus which he obtained in pure culture, however, apparently exists in the vesicle as soon as it is formed. The usual treatment of pemphigus has in my experience proved most unsatisfactory, and although I incline to the view that the cause of the disease is probably to be found in some defect of the nervous system, I think that a careful bacteriological examination of each case might do a great deal towards enlightening us as to the origin and treatment of an obscure and obstinate complaint.

THE ÆTIOLOGY OF CONGENITAL WORD-BLINDNESS; WITH AN EXAMPLE.

By W. J. RUTHERFURD, M.B., Ch.B.

IN 1896 Dr. W. Pringle Morgan described a case of the congenital form of word-blindness,* and four years later Dr. Hinshelwood, of Glasgow, reported two further instances.† Stone and Douglas‡ two years later, in 1902, described hereditary aphasia, the corresponding defect in the receptive centres, and in 1905 Dr. C. J. Thomas called attention to the fact that this congenital form of word-blindness may assume a family type.§ In 1907 Hinshelwood, confirming the observation made by Thomas, described a family group|| in which no less than four brothers out of a family of eleven children were the subjects of this defect. The family history of the present case here detailed goes still further to prove the ætiological influence of germ-plasm defect, and not merely of this alone but of the effect of in-breeding, in giving rise to congenital word-blindness, or, as it may with propriety be termed, dyslexia congenita.

Bertha Ellen S—, aged 10 years. This patient, although ten years of age, cannot read without difficulty even words of one syllable. Such words as *an, of, the, if* she reads with ease, but monosyllables of slightly more complex type like *harsh, think, first*

* W. Pringle Morgan, 'Brit. Med. Journ.,' November the 7th, 1896.

† Hinshelwood, 'Lancet,' May the 26th, 1900.

‡ Stone and Douglas, 'Brain,' 1902.

§ C. J. Thomas, 'Ophthalmic Review,' August, 1905.

|| Hinshelwood, 'Brit. Med. Journ.,' November the 2nd, 1907.

are quite beyond her power. She cannot remember words that have been pointed out to her but the moment before, and either makes the wildest guesses or else lapses into frightened silence. She is unable also to give the pronunciation of a word the letters of which are spelled over to her, a possible indication that in her case the auditory centre shares in the defect of the visual. Although to this degree alexia is well marked, she can readily appreciate the meaning of coloured pictures.

She is said to be, for her age, smart at figures, and certainly so far as I have tested her appears to know something of the multiplication table, though not much about the addition of sums of money. Her relatives have transferred her from one school she used to attend to another, as the teacher she had been under before had not appreciated her limitations and had ridiculed her before the other children. At present, instead of being in Standard III along with the other children of her own age, she is in the first standard along with children of six years and upwards. The visual acuity is good; it was not considered necessary to have an examination of the fundi made.

Her school teacher, whom I interviewed, told me that she considered the child to be up to the average of the rest of the class in which she is—but not of her age—in arithmetic, in her handwriting, and in her general intelligence, being only markedly deficient so far as reading is concerned. Her reading in class is absolute nonsense, as she puts into the piece all sorts of words apparently for the sake of saying something rather than standing silent. Her teacher said that she believed the child to be possessed of pretty fair common sense; she is neat in her person, has a good idea of colour, and is able to draw and paint crudely to copy just about as well as can the other children in the class. The child is able to write to copy, but not to dictation. One morning her class was set a dictation of only twenty simple words forming a complete sentence (words such as *dream*, *tale*, etc.), and was given ten minutes of preparation for it; at the end of that time when the piece was dictated she had no less than ten of them wrong.

Her teacher compared her deficiency in this direction to that of a boy whom she had formerly taught, who had a general lack of intelligence, being an incorrigible dunce in every subject, and whose brother is a congenital imbecile. It is significant that while talking to me about this girl she used the word stubborn with regard to her, at once correcting herself however, and for my benefit replacing it by the word stupid.

The teacher was good enough to offer to procure for me an old school-exercise book of the child's so that from it I might be able to see for myself what she achieved in the various departments of school work. The headmaster of the school got wind of this however, and, considering his dignity to have been compromised in that I had not gone to him direct in the first instance, put his foot down, refusing to allow the book—which was about to have been destroyed in a batch of other rubbish in the furnace—to leave the premises. As I was at the time on the eve of leaving the district permanently I never had any opportunity of seeing this important personage about the matter, and had to drop all idea of examining specimens of her actual school work.

A younger sister, who is six years old, can read fairly well for her age. Both these children are alike nervous and easily frightened. They have yellow hair and pale, foolish faces, but neither of them is albinoid. They are certainly not either idiotic or imbecile—such is not the reason for the illiteracy of the elder child.

The full details of the family history are of the greatest interest, and were not obtained without considerable difficulty and the exercise of much patience. Her parents and grandparents are quite illiterate, and she and her sister are the two youngest out of a family of five children—all illegitimate. Of these five children the first two were born prematurely and both died in fits, one when five months old, the other at the age of fourteen weeks. The third child died when eleven weeks old of what was described as croup, but which, in the light of this history, may quite possibly have been either laryngeal spasm or rapidly fatal œdema glottidis from a laryngeal neurosis, such as older writers used to term “internal convulsions.” Their mother has been asthmatic for years, and has recently developed hepatic cirrhosis (without, however, any definite indication of its being of syphilitic origin). Some years ago she was operated on for a pedunculated cancer of the thigh; she also has a parenchymatous goitre, of the existence of which she was totally unaware. She is an only child and is herself illegitimate; by the time she was twenty-five she had had no less than three illegitimate children of her own and they were all dead.

The grandmother has no goitre, but has a tumour in the region of the right parotid strongly suggestive of a sarcomatous growth, and her mother's sister is said to have a similar tumour in the same situation. The maternal great-grandmother had a huge pendulous goitre hanging down like a bag over the front of her chest. She was a woman who had had fifteen children (of whom apparently

three were stillborn, but of this I cannot be certain) and who died at the age of forty-seven years. The goitre seems to have originated when she was about thirty years of age, and her daughter distinctly remembers that it got larger every time she had a child. Her husband had a brother, vaguely described as "a bad lot," who, though a labouring man, died leaving £4500 to be divided among his three sons—if such a detail as this be worth recording.

Of the family of fifteen mentioned above, the eldest died in childhood in consequence of a nail having impacted in his throat while he was amusing himself in the pleasant and childlike recreation of making a little coffin for his baby sister. Another is the father of a diabetic son. Still another, the third child, is an inspector of police, and has been entrusted with many special missions, such as the extradition of criminals from abroad, and has been mentioned in the newspapers for a gallant rescue from a burning building. The youngest but one is a confirmed alcoholic (and was described as being "an awful swearer"); I have seen him several times and there is no doubt whatever that he is weak-minded; he it is who is the father of the girl who has word-blindness and of her brothers and sisters: in other words, he is their mother's uncle.

The particulars of this parentage I have had confirmed for me in certain of its details by a medical man who has known the family for some twenty years.

A more perfect example could hardly be wished for to illustrate the effect of defective hereditary material in the causation of dyslexia congenita, and to prove that the cerebral lesion, or localised aplasia as it probably is in these cases, may depend on a cause actually antecedent to the first cell divisions of the fertilised ovum. That the relatives exhibited varying degenerative manifestations and that some of them may have been in their own way quite estimable members of the community is not to be wondered at; a family tottering to its fall not infrequently—to borrow an expression used by the stock-breeder—"throws" variants from the common stem now to one side and now to the other, and the well-known view of Lombroso may be referred to, that genius (in certain cases) may be taken as the product of a rotten stock, "a true degenerative psychosis" as it has been phrased.

The condition is thus seen to be of the nature of a reversion to the pre-civilised type as the result of loss or destruction of certain of the later and more highly specialised determinants in the gametic idioplasm, and as such it falls in line with many other of the phenomena of atavism. It is entirely different from those examples

of dyslexia recorded by Berlin,* by Hinshelwood† and by others in which there was rapid exhaustion of the cerebral centres for words on consecutive effort, resembling the muscular fatigue that occurs in myasthenia gravis or in intermittent claudication of the lower limbs, and like these conditions apparently in some cases of toxic origin or due to vascular sclerosis, leading to anæmia of the sensory centre, with the consequent rapid exhaustion on even slight increase of metabolic activity.

The memories of visual concepts of objects are stored as impressionist pictures in the brain. By education the laborious processes of visual sensation, comparison with the previously stored images in the cortex and psychical recognition are made easier, and are carried on almost with the automatic rapidity of reflex action. In cases of congenital word-blindness even after prolonged training all the laborious steps of the process have to be carried out one by one with such visible effort that one might almost think the mental machinery were creaking under the strain. The words never come to be vested with significance in virtue of their shape and the general appearance they present to the eye.

DELAYED CHLOROFORM POISONING.

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THIS unfortunate condition, resulting in death after sixteen days' illness, occurred in a case for which I recently did a minor plastic operation. The child, a girl, aged $2\frac{1}{2}$ years, had some months previously fallen backwards on the fire-place. As a result of the burn the nates were bound together by a band of cicatricial tissue, and the child was operated on for the relief of this adhesion.

The operation, chloroform being the anæsthetic used, lasted about fifteen to twenty minutes. It is necessary to mention that when the wound was being dressed on the second day after the operation the child screamed so much and was so refractory that it was given a few whiffs of chloroform, which caused only partial anæsthesia.

It was noticed before the operation that the child had the

* Berlin, 'Eine Besondere Art der Wortblindheit (Dyslexia),' 1887.

† Hinshelwood, 'Letter-, Word- and Mind-blindness,' ch. iii, 1900.

appearance described as "pre-tubercular." The face was flushed, the eyelashes were long, dilated veins were seen on the chest, and some patches of erythema about the shoulders.

On the third day after the operation the child was restless and feverish. She vomited several times during the day and the following night. The bowels were confined.

The vomiting continued during the fourth day. It might be described as persistent. The temperature often reached 102° F., and the child was evidently extremely ill. There were no physical signs present, and the usual treatment for gastritis was carried out.

On the fifth day the vomiting continued, and the condition was aggravated. There were no physical signs to account for the condition. Delayed chloroform poisoning was then suspected, and on the urine being examined, acetone, diacetic acid, and a trace of albumin were discovered.

The utmost measures were taken for the treatment of the condition. Half a drachm of bicarbonate of soda was given every four hours. Saline injections and nutrient enemata were given when thought necessary, and later in the illness transfusions of glucose. The bowels were kept free, and the child was dipped in a warm bath every day and wrapped in blankets. The latter measure had to be stopped as it was too weakening.

In the last week of the illness "air hunger" was well marked, and the child lapsed into a state of semi-unconsciousness. The vomiting occurred seldom. The child wasted much and was evidently dying. During the last five days the fæces became clay-coloured, showing a condition of acholia, due, no doubt, to fatty infiltration of the liver. The pulse at the end had become irregular, and a similar condition in the heart was suspected.

Taurocholate of soda and sulpho-carbolate of soda were given as hepatic stimulants, but no beneficial effects could be traced to their action.

The condition became worse. Delirium was present, and the case at the close resembled one of tubercular meningitis. The treatment was continued without cessation to the last. Bicarbonate of soda in large doses was given in injections and transfusions. It became impossible to give food by the mouth. Brandy was also used.

Some days before death the urine was again examined. Acetone and diacetic acid were present, one in increased amount. The end came quietly on the sixteenth day after the operation.

The child lived an unusually long time, and knowing that cases

of recovery have been reported the treatment was persisted in to the end, and at times the possibility of cure was thought of.

Unfortunately no post-mortem was permitted, but from the condition of the urine, the character of the pulse, and the colour of the fæces, there can be little doubt but that the case was one of delayed chloroform poisoning, resulting in fatty infiltration of the heart, liver, and kidneys, ending, as it usually does, in death.

THE CREMASTERIC REFLEX.

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A REFLEX act consists of the contraction of a muscle or group of muscles in response to a sensory stimulus, and the elements necessary for its production are an afferent nerve, a centre, and an efferent nerve; the whole being called a reflex arc. The cremasteric reflex is the retraction of the testicle on stimulating the inner and upper aspect of the thigh. It is a type of the superficial reflexes which are caused by stimulating the superficial nerves of the skin. The afferent and efferent nerves for its production are in the trunks of the first and second lumbar nerves; and the "centre" is in the lumbar enlargement of the spinal cord. Comparatively little is known of the natural history of this reflex, yet a little clinical experience showed that it was sometimes present, sometimes absent, and possessed many variations. In order to gain more definite knowledge it was investigated in some 300 cases, aid in the work being given by Drs. Irving Pinches and R. E. Whitting, my clinical assistants at Great Ormond Street during that period. The conditions found in about 100 adults attending St. Thomas's Hospital concluded the investigation. In this way some knowledge of the natural history of the reflex has been collected.

The subject will be considered under the following headings:

I. The physiological history.

II. (A) Its methods of production.

(B) The variations in the results produced.

III. The inguinal reflex of girls.

IV. The clinical characters.

I.

The life-history of the cremasteric reflex is full of interest. In the first place, it is natural to expect its presence to be found in the male subject alone. This is not quite true; a corresponding inguinal reflex can be obtained in girls, particularly about the ages of seven to twelve. From that date onwards it slowly recedes and cannot be found in every woman.

The cremasteric reflex is not present at birth but makes its appearance in the second year of life. There is considerable individual variation in this, the reflex act appearing in the second three months of life, or, as in the case of defective mental development, it was not present at eight years of age. The rapid acquisition of the reflex would seem to entertain a precocious nervous, not sexual, development. Its slow acquisition would indicate either a slow nervous development or the presence of some general or local disease. When it has once appeared the reflex rapidly becomes brisk, perhaps so brisk that the testicle, which was originally in the scrotum, ascends and appears to be imperfectly descended. An abnormally brisk cremasteric reflex is the cause of the apparent imperfect descent, occasional disappearances, and the great mobility of testicle often seen in young boys. From the ages of about eight to twelve it is quite common for the reflex to become more sluggish and feeble, which condition I would correlate with the exhaustion of commencing education or, perhaps, with the habit of masturbation. With the onset of puberty the cremasteric act returns to something like its former power and extent but never to the same degree as it is present in boys about six or seven. Later in life it becomes lost again.

II. VARIATIONS IN THE CREMASTERIC REFLEX.

A. *Variations in its production.*—It is usually produced by sharply stroking the inner and upper part of the thigh, the popular professional idea being that the afferent stimulus is conveyed to the lumbar centre by the crural branch and the efferent impulse by the genital branch of the genito-crural nerve. But this is not so.

In some cases a cremasteric reflex may be produced in a variety of ways. It may be produced by stimulating the crural branch of the genito-crural nerve, branches of the internal cutaneous nerve, of the middle cutaneous nerve, occasionally of the external cutaneous nerve, frequently by stimulating nerves supplying the inguinal region

or the side of the abdomen, sometimes stimulation of the perinæum and anal region. Stimulation of the prepuce and skin of the penis may produce a reflex.

B. *Variations in the reflex action produced.*—As a general rule movement of the testicle of the side stroked is the result of the stimulus. But it is not at all infrequent to find that there is unequal bilateral response, the testicle of the opposite side being drawn up to a lesser extent than that of the side stimulated. There may be, but less frequently, an equal bilateral response; and yet again, but still more infrequently, unilateral response of the testicle of the opposite side to which the stimulus was applied. There is quite a frequent variation of the cremasteric response which is quite comprehensible. The cremaster muscle is derived from the internal oblique muscle. So that when the former muscle responds to a stimulus, the efferent impulse overflows the innervation paths of the cremaster, producing in addition a contraction of the internal oblique, probably also of the transversalis in the inguinal region. Or at other times there may be a general contraction of the abdominal muscles of the same side. Thus the cremasteric reflex becomes part and parcel of the abdominal reflex. This is well shown by the cremasteric response often being demonstrable if the skin of the lower abdomen is stimulated. Equal and unequal cremasteric responses are seen from time to time, but a crossed cremasteric response to abdominal stimulation has never been seen. Similar responses have been seen in the inguinal reflex of girls. So that the inguinal, cremasteric, and abdominal reflexes are bound up together in their physiological and pathological responses, as would be expected from the anatomical development of the regions.

In what has been written, stimulation of the upper and inner part of one thigh has been regarded as the sole stimulus. When this is so, as a general rule, unilateral responses on the same side are obtained. But if areas, such as the skin of the perinæum, the anal region, the penis or prepuce, are stimulated the response of the testicles is usually equal and bilateral. All bilateral responses, particularly when combined with inguinal and abdominal responses, are best seen in boys of six or seven, in whom the reflex is very brisk. Stimulation of the scrotum itself may produce a unilateral or bilateral cremasteric response.

C. *The summation of the cremasteric responses.*—When the reflex is brisk it is possible to retain the testicle in the groin by repeated applications of the stimulus. The repetition of the afferent impulse causes a repetition of the efferent impulse, which prevents the relaxa-

tion of the cremasteric contraction. The early repetition of the stimulus increases the cremasteric contraction. Later the efferent impulses can no longer do this, but merely retain the testicle in its raised position by maintaining the contraction of the cremaster. Later still both the muscle and the centre become fatigued, the muscle gradually relaxing and the centre failing to respond to afferent stimuli. Both the muscle and centre recover their irritability quickly in a healthy subject, but are slower to do so in the debilitated and weakly.

There is a further corollary of this physiological summation of the cremasteric reflex. In some children the cremaster muscle is found in a state of tonic contraction, the testicles being in consequence imperfectly descended. Our knowledge of these cases is not great at the present moment. It would appear that this tonic reflex contraction, as it is called, may be produced in two ways—reflex and automatic.

(a) *The reflex*.—This is dependent upon the habitual summation of afferent stimuli, which arise from the habitual stimulation of the thighs, lower abdomen, and the genitalia by the clothes. Practically, testicles may descend or appear from the abdomen if the child is protected from such stimuli, as by lying naked in bed with a fracture-cradle supporting the clothes. I have known testicles discovered in this way which were thought to be irretrievably retained in the abdomen or very high in the inguinal canal. Great care must be taken in making the examination to prevent the reascent of the testicle from a reflex contraction of the cremaster excited by the examination.

Another fact which may be regarded as evidence in favour of this habitual summation of afferent impulses is that when such impulses are prevented, as by an anæsthetic and exposure before an operation, the testicles may be found in the scrotum for the first time.

(b) *The automatic*.—This is dependent either on the action of the brain and higher centres or on the lumbar centres originating efferent cremasteric impulses on its own account. It is difficult to produce evidence in favour of this contention and to exclude the possibility of the summation of afferent impulses by an excitable lumbar centre. But I would point to three possible sources of evidence of automatic action of the lumbar centre :

(1) With extreme excitability of the lumbar centre, as found in some cases of enuresis, the testicles are found retracted and almost incapable of responding to stimulation of the thigh.

(2) The association of retracted testicles in the scrotum of the healthy.

(3) The retraction of the testicles in sexual excitement.

In the two last instances the maintenance of the retraction is in all probability from the central nervous system.

III.

It has been found that there is a reflex which corresponds to the cremasteric reflex of boys. The cremaster muscle is derived from the lower fibres of the internal oblique in the inguinal canal. In girls a reflex contraction of these lower fibres of the internal oblique muscle can be produced by stimulating the thigh, lower abdomen or external genitalia, as in exciting a cremasteric reflex in boys. I would suggest the name, an "inguinal reflex." It is similar in its life-history to the cremasteric reflex in boys. It is absent in baby girls, appearing in the second or third year of life; it is often very brisk in girls of six to eight years of age and disappears shortly after puberty, when it becomes merged into the reflex contraction of the lower abdomen. There are unilateral, equal and unequal bilateral and crossed responses, just as has been detailed in connection with the cremasteric reflex. A summation of the inguinal reflex and its fatigue were seen, but nothing in the shape of a tonic reflex or automatic inguinal response was found. Clinically the inguinal reflex was raised by health and disease in a way similar to that in which the cremasteric reflex was. But no relation was observed between any condition of the ovary and the character of the inguinal reflex, such as was found between the testicle and the cremasteric reflex. This statement is in reality no more than an acknowledgment of the ignorance of the condition of the ovary in young girls.

IV.

The character and condition of the cremasteric reflex is of some practical importance apart from its possibilities in medical diagnosis. And the general results of a number of observations will be mentioned. A great number of these observations were made at Cromwell House, Highgate, a hospital for convalescent cases from the Children's Hospital, Great Ormond Street, whilst holding the office of visiting surgical officer for five consecutive years, during which time I saw a large number of cases. The general remarks for the practical guidance will be given in tabular form.

(1) The reflex is best in healthy children. It is weakened or abolished in ill-health. It has therefore some value in detecting or in confirming the detection of malingering children.

(2) Any general disease will weaken or abolish this reflex.

(3) Rickets is a disease peculiar to children, and as it takes some months for the bony changes to become apparent, during which time the disease is active, special attention was paid to this stage of the disease, and it was found that in the early stage of rickets the cremasteric reflex was much weakened and often abolished.

(4) All operations on the inguinal canal temporarily abolished this reflex. In a wound of the operation for the radical cure of a hernia the healing of the skin is seen, but we know nothing of the "healing" of the *deeper* parts. I would suggest that the clinical character of the cremasteric reflex may help. The following suggestions are made for practical guidance.

(i) In all cases the reflex is temporarily abolished.

(ii) If the wound suppurates, it is abolished for longer than if the wound heals by first intention.

(iii) The reflex is abolished for a longer time (a) if the whole hernia sac is stripped up and removed, instead of being divided and only the proximal part removed, (b) if the inguinal canal is sutured; (c) if the spermatic cord is transplanted as in Halstead's operation, or if it is raised as in Bassim's operation; than it is if the internal abdominal ring is sown up over the cord as in Fergusson's (or Foster's) operation. Should only the sac be removed as advocated by Mr. Hamilton Russell of Melbourne and Mr. R. W. Murray of Liverpool, the reflex is abolished for only a few days.

(iv) If the inguinal canal has been sewn up, it may be formulated that—(a) if the reflex returns in ten days or a fortnight some of the stitches in the canal have not held; (b) if the reflex is abolished for more than four weeks, the wound healing by first intention, the spermatic cord has been injured, or there is deep suppuration; (c) if the reflex returns two or three weeks after the operation its return is about normal.

These conclusions would doubtless require modification with further observations. A parallel condition may be pointed out—the influence of cœliotomies of the abdominal reflex. I have made a number of observations on these, and have noticed some points which bear out some of the statements made about the cremasteric reflex. For example, the reflex returns more quickly if the wound heals *per primam* than if it suppurates. It also returns more quickly after "fibre-splitting" operations such as the paramuscular

incision of McBurney for removing the appendix, than after those in which the muscles are cut or injured. It also returns more quickly if the inflammatory products of the repair of the wound are removed by massage than if they are merely left for absorption.

The operation for varicocele, if performed early enough, seems to have a far more reaching effect in abolishing the cremasteric reflex than has the operation for the radical cure of a hernia. Such a result would be expected, as in the former the spermatic cord is injured whilst in the latter it is not.

A sufficient number of observations have not been made on such cases to warrant further generalisations.

(v) Incontinence of urine—enuresis—is in some cases caused by, and in many cases accompanied by, a superlative excitability of the lumbar centres. In such cases the testicles may be tonically retracted and incapable of responding to a cremasteric reflex. In other cases the condition may be dependent on worms, alimentary disturbances, bad habits, rickets, etc., when the testicles may be dependent and capable of response (or not) to a cremaster reflex.

(vi) It is sometimes a question of diagnosis and of importance in prognosis and treatment to decide if the imperfect descent of the testicle is due to—(a) lack of developmental capital, when the reflex is weak or absent; (b) to some mechanical obstruction, when the reflex is strong; (c) or associated with the condition of movable testicle, arising from an abnormally brisk reflex dependent on the summation of stimuli or on a tonic contraction of automatic origin. In such cases there may be no cremasteric reflex. They may be only separable from class (a) by careful observation and the avoidance of stimuli, as by lying in bed with the clothes raised by a cradle.

(vii) A movable testicle is dependent on (a) imperfect development of the testicle with a long mesorchium; (b) the imperfect descent of such a testicle in (a); (c) a summation of stimuli with a brisk cremasteric reflex; (d) a tonic cremasteric contraction of probable automatic origin. These questions are of practical importance, because in (a) and (b) the prognosis is very different to what it is in (c) and (d). Then the treatment is different in (c) to what it is in (d).

(viii) In older children and young adults it is of practical importance to note the relation between the condition of the scrotum and the character of the cremasteric reflex. In babies and young children the scrotum is thin. As puberty approaches a layer or collection of involuntary muscular fibres appear in the subcutaneous

tissue, the scrotum being thicker and, at the same time, being capable of contraction and relaxation. In healthy, active conditions the scrotum is contracted and rugose, with retracted testicles. In such cases, owing to the position of the testicles, there is little scope left for a cremasteric reflex action. This is the condition in vigorous, healthy adults. In disease, sickness, and nervous conditions, the scrotum is often smooth and lax, with pendulous testicles. In such cases there may be a feeble cremasteric reflex retained. The contracted scrotum is dry, the lax scrotum usually moist.

(ix) The presence of a varicocele always hampers a cremasteric reflex. But as the cremasteric reflex tends to disappear as the contracted scrotum of puberty develops, it follows that the reflex often ends before the varicocele begins. But a varicocele produces a lax scrotum and pendulous testicle, a condition in which a small reflex cremasteric contraction can be generally demonstrated.

(x) An inguinal reflex, comparable to that of young girls, can be found in males in whom the testicle is retained in the abdomen. It has some practical value, as if the testicle cannot be found it is either a movable testicle or an imperfectly descended testicle; in the former case there may be no inguinal but a cremasteric reflex; in the latter it is present with an abdominal testicle.

(xi) In spastic conditions the cremasteric reflex, curiously enough, seems sometimes unaffected. But sometimes the testicles are retracted by tonic contraction of the muscles.

A CASE OF SPONTANEOUS INTRA-CYSTIC HÆMORRHAGE INTO A CYSTIC HYGROMA OF THE NECK IN AN INFANT; OPERATION.

By C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.

WHEN fourteen days old the infant, a female, was noticed by the mother to have a swelling under the tongue and another swelling in the left side of the neck. When first seen, at the age of six weeks, there was under the left half of the tongue a ranula-like swelling, which raised the floor of the mouth $\frac{1}{4}$ inch higher than the other side. There was also an elastic swelling in the neck below the angle of the left jaw.

The mother asked for immediate operation, and was told to

wait until the child was older and stronger, unless respiration or swallowing should become interfered with. During the next fifteen months the hygroma increased in size only in proportion to the growth of the child. At the age of one year and five months the cervical tumour suddenly enlarged to the size of a lawn tennis ball and became in parts very tense. The child developed a cough and had difficulty in swallowing.

Diagnosis.—Hæmorrhage into some of the cysts.

Operation.—Through a curved 3½-inch skin incision with its concavity upwards, extending from the left angle of the jaw to the middle line of the neck.

The larger cysts were full of extravasated blood. The smaller cysts contained clear straw-coloured fluid.

A mass of collapsed cysts and connective tissue, measuring 1½ by 1 by 1 inches, was dissected out, freely exposing the bifurcation of the carotid artery. Innumerable blood-vessels running in the connective tissue between the cysts required ligation. Several large veins, including the facial, external and internal jugular, were also tied.

The inner and outer thirds of the skin incision were sutured, and through the middle third the cavity was packed with gauze.

At the end of a week domestic reasons compelled the mother to take the child home. The neck was then healed except for a small sinus in the centre of the scar which discharged a little clear cystic fluid. Five days later the child was brought back with an acute brawny and œdematous infection of the neck, which necessitated opening up the whole scar and the making of several counter-openings. After nearly dying, the child, thanks to good nursing, recovered.

Seen a year later, in August, 1909, *i.e.* at the age of 2 years and 5 months, the child was in good health, the swelling beneath the tongue was somewhat more prominent, with the neck swelling projecting only slightly, and the scar, owing to its position and the fatness of the child, comparatively inconspicuous.

The swelling in the mouth, which at present interferes neither with respiration, deglutition, nor articulation, will need treatment at some later date, when the scar in the neck can be reduced to a linear cicatrix.

A CASE OF ANTERIOR POLIOMYELITIS LIMITED TO THE LOWER DORSAL REGION, AND GIVING AS ITS MOST PROMINENT SYMPTOM PARALYSIS OF THE ABDOMINAL MUSCLES ON BOTH SIDES.

By C. P. LAPAGE, M.D., M.R.C.P.,

Physician to the Manchester Children's Hospital, Pendlebury.

N. H—, a well-nourished boy, aged 9 years, was admitted to the Manchester Children's Hospital, Pendlebury, on June the 16th, 1909. There was nothing of note in the family history or the medical history previous to the present illness, which began eighteen months ago, when the child was suddenly taken ill with listlessness, anorexia, and constipation, but no pain; he was unable to sit up, the right leg seemed weak, and just at this time his neck was swollen on both sides.

Twelve weeks after the onset of the illness, when I first saw the boy, who was then under the care of the late Dr. Ashby, he was very weak and unable to raise himself into a sitting posture; but the most striking symptom was the ballooning of the abdomen, combined with a falling-in of the lower part of the chest-wall, and a general kyphosis of the dorsal region of the spine. When his shoulders were held the boy could correct these deformities, which were evidently due to paralysis of the abdominal muscles, the lower intercostals, and part of the erector spinæ. The limbs were normal, and no other lesion could be demonstrated.

The boy was admitted to hospital, and the notes taken by the house-physician, Dr. T. M. Bride, show that the limb reflexes and the cremasteric reflexes were normal, but that the superficial abdominal reflexes were lost. The other systems were normal, and there was no spinal caries. The abdominal muscles did not react to the Faradic current, and constipation was an obstinate and a troublesome symptom. Neither palatal nor eye-muscle paralysis was present. The boy was discharged after having been fitted with a poroplastic jacket.

In June of this year the boy was again admitted to hospital, and his present condition is as follows: The abdominal muscles are completely paralysed except for two narrow bands about one eighth inch in width, stretching, one from the tenth rib on the left to the umbilicus, and the other from the umbilicus to Poupart's ligament on the right. These bands show marked fibrillary contractions and

are very excitable. During respiration the abdomen balloons out above and below these narrow strips of unparalysed muscle, and the lower part of the chest-wall is depressed. The lower three or four intercostal muscles are also paralysed. The erector spinæ over the lower dorsal and upper lumbar regions is much wasted, causing the spines of the vertebræ to stand out prominently, so much so that the possibility of spinal caries was suggested, but the spine is quite flexible. The electrical reactions show that the affected muscles, except for the narrow strips mentioned above, are inexcitable to either current. The lower limbs are normal, but the psoas muscles on each side are hypertrophied, and, when the patient is struggling into a sitting posture, these muscles can be felt as large, tense bands in each iliac fossa. The superficial abdominal reflexes are absent except for the response on the left side due to the over-excitability of unparalysed muscle, the cremasteric reflexes are active, and the limb reflexes are normal. There is no anæsthesia. Constipation is still a marked symptom. The child is able to walk about fairly well and is quite comfortable in a spinal jacket, but he is only able to raise himself from a recumbent to a sitting position with great difficulty, and when he stands up the abdomen is prominent, with the chest-wall much sunken and depressed in front.

The case is of interest because the disease picked out and was limited to the lower dorsal region, producing paralyses that are rarely seen. The only other part affected was the right leg, which was said to be weak at the onset of the illness, but was so only for a short time and is now normal. The swelling of the neck early on in the illness may have been diphtheritic, but there were no eye or palatal symptoms, nor any other signs pointing to peripheral neuritis.

Fowler ('Medical Press and Circular,' January the 3rd, 1906) reports a case of unilateral paralysis of the abdominal muscles combined with paralysis of the limbs, and, amongst other references, quotes a case of Ibrahim's ('Deutsche Zeitschrift f. Nervenheilkunde,' 1905, Bd. xxviii, Heft 1-2), where there was double paralysis of the abdominal muscles. Most text-books give no reference to infantile paralysis of the abdominal muscles, nor to its striking characteristics, but dismiss it under a reference to paralysis of the trunk muscles.

Editorial.

SECRET REMEDIES.

THE British Medical Association has done a great service to the public and the medical profession by having undertaken the analysis of many of the more common secret remedies which are so widely used. The results of this analysis are contained in a small book which has just been published by the Association, entitled 'Secret Remedies: What they Cost, and What they Contain.' Not only has an analysis been made of each patent or secret remedy, but also the statements of its wonderful action, etc., by the vendors have been reproduced, so that the book gives most entertaining reading, especially to a medical practitioner.

The chapter which deals with the analysis of the various "soothing, teething, and cooling powders for infants" is of considerable interest to those who are especially associated with the treatment of the ailments of childhood. It seems that proprietary infants' powders, although they are not many in number, are very widely advertised and sold in large quantities. We are glad to see that in the four powders analysed morphine was not detected in any of them. It seems, however, probable that in many of the other infants' powders which are not so popularly used this alkaloid is often an important ingredient. The analysis of the four powders is here given.

Stedman's Teething Powders.—The average weight of each powder is 2·4 grains, and the analysis showed that it was composed of calomel 29 per cent. and sugar of milk 71 per cent. There was a trace of an alkaloid present, which did not appear to be morphine, and as it was in minute quantities, only 0·016 per cent., or $\frac{1}{2500}$ grain in each powder, it was extremely difficult of identification. An alkaloid in such small quantities could have very little effect, either beneficial or otherwise, so its presence need not be taken into consideration. The powders in a 4s. 6d. box numbered sixty, and contained materials which, on referring to an ordinary wholesale drug list, could very fairly be submitted to cost about one third of a penny.

Steedman's Soothing Powders.—The powders weighed on an average 2·8 grains each, but varied considerably from 1·9 to 4·5 grains. The analysis showed the powder to be composed of calomel 27 per cent., sugar 22 per cent., maize starch 50·5 per cent., and ash 0·5 per cent. An alkaloid was again found to be present, but in even less quantity than in Stedman's teething powders. The dose was: one to three months, a third of a powder; three to six months, half a powder; and after six months one powder only and no more. The ingredients of a 2s. 9d. packet, which contained twenty-four powders, were estimated to cost about one eighth of a penny.

Pritchard's Teething and Fever Powders.—The average weight of the powders was 2·1 grains. Upon analysis the following ingredients were found: calomel 47 per cent., antimony oxide 0·7 per cent., calcium phosphate 1·4 per cent., and sugar of milk 50·9 per cent. There was no trace of an alkaloid. The dose to be given was arranged according to age as in Steedman's powders. The ingredients of a 1s. 1½d. box, which contained sixteen powders, were estimated to cost about one ninth of a penny.

Fenning's Children's Cooling Powders.—The average weight of the powders was 3·4 grains, and the analysis showed that they consisted of potassium chlorate 70 per cent. and powdered liquorice 30 per cent. The circular enclosed with the box described the powders as "the best medicine for infants cutting their teeth, preventing convulsions, thrush, disordered bowels, and for all the feverish diseases of infants and children." A 2s. 9d. box, holding forty-eight powders, was estimated to contain ingredients of the value of about one sixth of a penny.

These powders are widely used by ignorant mothers of the poorer classes, but now that in the large cities there are health visitors who call to see the mothers of newly born babies with the object of educating them in the right way to look after their offspring, we expect to find that these unfortunate infants will not be so often promiscuously dosed with quack nostrums whenever there is some digestive trouble, brought about, as is usually the case, by improper feeding or uncleanly habits. Many children of this class are not brought to a medical adviser until various kinds of soothing or teething powders have been experimented with for some days.

The Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, October the 22nd, 1909.

Dr. G. A. SUTHERLAND *in the Chair.*

Two Cases of Anterior Poliomyelitis involving the Four Limbs were shown by Dr. A. MANUEL. The first was a child, aged 1 year and 8 months, in whom the condition developed suddenly after a slight injury. The child's temperature when brought to the hospital was 100° F., and all four limbs were paralysed. Some improvement had occurred in the arms since the child was admitted. The second case was a child, aged 1 year, in whom the condition resulted from a sudden illness on August the 15th; considerable recovery in the arms had already occurred, but there was still complete paralysis of all the extensors of the foot and leg.

A Case of Extra-Capsular Fracture of the Neck of the Femur in a boy, aged 6 years, was shown by Mr. RALPH THOMPSON. The injury had resulted from a fall. The diagnosis was at first very obscure, but a skiagram revealed the true nature of the injury. The case had been treated by extension and Thomas's hip splint.

Mr. MUMMERY said that this injury was very seldom diagnosed in children, but some of the cases of obscure deformity of the hip-joint were very possibly due to a similar injury.

A Case of Congenital Hemi-dystrophy was shown for Mr. HOWELL EVANS by Dr. HIGGS. The patient was a child aged 1 year and 10 months. When only a month old it was noticed that the left side of the tongue was larger than the right, and later that there was asymmetry of the abdomen. At the present time a marked difference can be observed between the sizes of the two sides of the body. It was pointed out that the condition in this case was progressive.

Dr. PARKES WEBER regarded the case as one of hemi-hypertrophy of muscular origin.

Mr. LOCKHART MUMMERY reminded the Section of a similar case which he showed two years previously. He considered the condition as being a progressive one and likely to lead to great deformity.

A Case of Chloroma was shown by Dr. ESSEX WYNTER. The patient was a female, aged $3\frac{1}{4}$ years, showing very marked facial deformity, which had been noticed since the middle of May. The face is unusually large and bony, with shiny, tense skin over the malar bones, and marked exophthalmia, especially on the right side. The glands about the neck were enlarged. The blood-count showed red corpuscles 3,630,000, white 30,000, hæmoglobin 56 per cent., and lymphocytes 66.2 per cent.

The CHAIRMAN said that he assumed that secondary tumours of the suprarenal capsule could be excluded.

Dr. WHIPHAM asked where the growths commenced, and Dr. LANGMEAD whether the diagnosis from lymphatic leukæmia had been gone into.

Dr. SPRIGGS mentioned a similar case of his own, and said that he was not convinced by the blood-count.

Mr. SYDNEY STEPHENSON recalled a case in which the child was suffering from secondary deposit from supra-renal sarcoma.

A Case for Diagnosis was shown by Mr. LOCKHART MUMMERY. The patient was a boy, aged $6\frac{1}{2}$ years, with a spastic gait and very marked contraction of both tendo Achillis. He was only able to walk on the tips of his toes.

Dr. SPRIGGS referred to a similar case which had been regarded as one of hypertonia.

Dr. JEWSEBURY pointed out that the case might be one of diplegia, as there were well-marked knee-jerks and Babinski's sign was obtainable.

Dr. HIGGS regarded the case as one of spastic paraplegia.

Dr. SUTHERLAND pointed out that there should be in that case some mental defect.

Mr. MUMMERY, in reply, said that there was no evidence of any mental defect.

A Communication entitled "Notes on the Pathology of some Liver Conditions in Childhood, with a Report of three Cases" was made by Dr. A. DINGWALL-FORDYCE. The first case was that of a child, aged 7 years, with subacute yellow atrophy of the liver. A year ago the child had an attack of jaundice, and since then had complained of pain in the left side of the abdomen. Seven weeks before death the child began to look ill, and the abdomen was noticed to be swelling. There was diarrhoea and vomiting, œdema of the back, paresis of the left leg and left side of the face, and a squint. Temperature 99° F., pulse 144. The post-mortem showed slight pleurisy and pericarditis. There was some bile-stained fluid in the peritoneal cavity. The stomach was dilated, and in the ascending colon there was an acute tuberculous ulcer. The liver was greatly reduced in size and almost flat, and its surface was irregular with well-marked yellow nodules. Microscopic examination showed yellow areas of hyperplasia and much fibrous tissue.

CASE 2 was a female, aged 8 years, who was admitted to the hospital with caries of the dorsal spine. She died of persistent vomiting a few days after admission. The post-mortem examination revealed a fatty condition of the liver, which weighed 460 grm.

CASE 3 was a male, aged 4 years and 8 months. The child was first seen on account of digestive troubles and on examination it was noticed that the liver was much enlarged. The child died after an operation which revealed malignant disease of the liver. Post-mortem examination, the liver was found to weigh $4\frac{1}{2}$ lb. and to be studded throughout with new growth. A tumour was discovered in the ileum about one foot from its lower end. The kidneys were enlarged.

A Specimen from a Case of Lympho-Sarcomatosis was shown by Dr. F. W. HIGGS. The specimen showed an appendix infiltrated with lympho-sarcoma. The kidneys also showed diffuse infiltration with lympho-sarcoma cells.

The Specimen from a Case of Acute Inflammation in an Appendix, involuted into the Lumen of the Cæcum, which then formed the Apex of an Intussusception, was shown by Mr. IVOR BACK. The specimen was removed from a girl, aged 8 years, by operation, the child recovering. It showed an appendix completely involuted into the cæcum and markedly inflamed. No explanation as to the origin of the condition was offered.

A Paper entitled "A Case of Pneumococcal Infection in an Infant Simulating Generalised Tuberculosis" was read by Dr. WALTER CARR. The patient was a child aged 15 months, who was admitted to hospital with an indefinite history of illness. The case was at first thought to be one of acute pneumonia, but when after several weeks the condition remained unaltered with an irregular temperature it was thought to be one of general tuberculosis. Calmette's test gave a negative result. The child died, and the autopsy revealed no trace of tubercle but a general pneumococcal infection. There was well-marked pericarditis. The right lung was universally adherent and the upper lobe showed old unresolved pneumonia; the left lung was also adherent. The peritoneal cavity contained about a pint of semi-purulent fluid.

Dr. SUTHERLAND said he regarded the case as a very unusual one.

Philadelphia Pediatric Society.

REGULAR Meeting, October the 12th, 1909, J. CLAXTON GITTINGS, M.D., President.

Pica in a Mental Defective.—Dr. E. F. CORSON, by invitation, showed a girl, aged 33 months, who at three months had fallen, striking her head so severely that she was unconscious several minutes and remained stupid some days. At eighteen months she was apparently a normal, healthy child. Soon afterwards it was noticed that she gnawed, chewed, and swallowed matting, cloth, string, wood, pieces of the furniture, etc. When two years old she had a sudden attack of vomiting, became drowsy, and remained in a stuporous condition for several days. She has not talked well since then. Six months ago she had a series of convulsions and has never spoken since. Apparently she does not hear either. She tears to pieces anything her hands find, and swallows it all. A visit to her home showed marks made by the child as high as her mouth would reach—a sort of "high-water mark."

Dr. D. J. MCCARTHY considered this a very rare condition as the result of a mental illness. Ordinarily a perverse appetite is functional; in this case it is evidently psychic.

Three Cases of Cerebral Infantile Palsy in One Family.—Dr. C. A. FIFE showed two children and reported a third, out of a family of five children. Great grandparents and grandparents were healthy. The father is a Russian Jew, never ill, but of a nervous temperament; does not use alcohol or tobacco, and gives no venereal history. Physical examination negative. He has five brothers and sisters living and well; two others died in infancy,

cause of death unknown. The mother is a hard-working English Jewess, with a negative history except for the evidence of poor nutrition. She has five brothers and sisters, while five others died in infancy. The mother was seventeen and the father twenty-one when the first child was born; he is now eight years old and seems healthy. The second child was normal at birth, but died at sixteen months, after two months of diarrhoea, without meningitis or paralysis. Mother became excessively depressed after death of child, would not leave house, and lost fifty pounds in weight. While in this condition she became pregnant for the third time. She gives no history of disease or injury during pregnancy, but she continued to work hard. Child born at term, breech presentation, easy delivery, no complications. Child was very spastic, affecting neck, trunk, and extremities, arms extended and pronated, fingers flexed, thighs and legs flexed, but no talipes. Mother says that child made no voluntary movements of the extremities or trunk. No signs of paralysis of the cranial nerves were recognised. Deep reflexes are reported to have been "present"; no clonus. Muscular development not strikingly abnormal, but mental development decidedly retarded. Died when about one year old. Mother became more despondent. One year later one of the children shown was born, after normal pregnancy, easy labour, head presentation, without complications. This child also showed general spasticity and loss of power in extremities, affecting most markedly the flexors and adductors; decided talipes varus. Child is now sixteen months old; muscles of neck are still somewhat spastic, and there is moderate kyphosis. There is increasing power in the arms and in the first two fingers of each hand. She can move her head and hold it up, but she does not sit alone. No paralysis of sphincters.

Dr. KRAUSS reports: "Paralysis of external recti muscles; failure of pupillary reflex to light, accommodation undisturbed, slight blurring of edges of disc in each eye; vessels normal in size." No other symptoms of cranial nerve involvement except a somewhat hoarse cry. Deep reflexes slightly exaggerated. Oppenheimer's eating reflex not present; Babinski's reflex present; no ankle clonus; skin reflex normal. Electric reactions normal. No sensory disturbance; no choreic or athetoid movements; no atrophy or hypertrophy of individual muscles observed; no convulsions. Possibly some mental deficiency, but the child is not idiotic. Physical development retarded; weight 14 lb.; length 70 cm.; greatest circumference of head, chest, and abdomen are respectively 44, 43, and 44 cm. Anterior fontanelle almost closed. Tuberculin test negative; urine negative; blood-count negative. The other baby is six weeks old. She is like her sister, only the spasticity and lack of power are greater, and there is no talipes. The child does not cry. In the three children the diagnosis made is cerebral infantile palsy of the diplegic type. While the ætiology is obscure, the cause must have been of pre-natal origin. Everything is negative except the malnutrition of the mother, possibly due to emotional causes. We cannot disregard the fact that two normal children were born before the mother became despondent, and all children born during the period of depression were paralysed.

Dr. McCARTHY considered these cases of Little's disease. At autopsy in such cases a very small pyramidal tract is found. This is probable due to multiple extravasating hæmorrhages into the cortex, cerebellum, and spinal cord at birth. Evidence is all against a primary sclerosis. Experimentally, in lower animals, a perversion of function of the motor cells occurs as a result of free blood in the tissues, resulting in destruction of the ganglion cells,

finally in calcification. Before birth localised hæmorrhage leads to an infiltration of the ganglion cells, degeneration and failure of development of the pyramidal tract. To show this Dr. McCarthy exhibited several specimens of new-born puppies. The talipes found in these cases is unquestionably the result of pre-natal poliomyelitis.

Dr. A. A. ESHNER said that a single case of this kind was interesting enough, but the occurrence of several similar cases in the same family was unusually interesting. In many such cases there is a history of prolonged or difficult labour, and it then seems not difficult to attribute the condition to hæmorrhage or traumatism, but in the absence of such an ætiological factor, one must think of some underlying condition in the mother as predisposing to a disorder occurring in several children. Dr. Eshner referred to a girl whom he had seen only the day before, presenting jerky, inco-ordinate movements of the head, whose brother had been under his observation several years previously with symptoms of cerebral spastic paralysis. Another brother in this family is said to have symptoms suggesting a similar affection.

Dr. D. J. M. MILLER said that infants will often exhibit symptoms of cerebral paralysis when autopsy reveals nothing macroscopically; but a microscopic examination will show diffuse meningo-encephalitis, as was found in a case under his care. This child, born by the breech, shortly after birth manifested great rigidity of limbs and retraction of head. This condition persisted; the least excitement would call forth a spastic condition. At eight months it could not hold up the head. It then acquired whooping-cough, during the paroxysms of which there would be extreme opisthotonos, which finally became almost permanent till death occurred.

Dr. FIFE repeated that there was no disease or infection in the mother which could explain the occurrence of these cases; nor was labour difficult or precipitate. The first two children were normal, born before any nervous disturbance had been noted in the mother.

Dr. MCCARTHY said that the type of mother in these cases had not been investigated by him. The transmission of bacteria or bacterial toxins may be possible. The question of the transmission of altered blood-tension from the maternal to the placental circulation should be considered. Dr. McCarthy had made some investigations along this line, but the results at present were such that satisfactory conclusions could not be drawn.

Leukæmia.—Dr. J. CLAXTON GITTINGS was to have shown the boy exhibited last at the May meeting. He was re-admitted to the University Hospital with a history of uncontrollable bleeding following the extraction of a tooth. Examination showed a slightly enlarged spleen (1 cm. below ribs), but no enlargement of the liver or palpable glands. At the apex of the left lung there were signs of beginning infiltration and the Moro reaction was faintly positive. A week later Vincent's spirillum was found in smears from the edge of the gums, followed by cervical adenitis, with cellulitis and abscess of the upper lip finally. This was accompanied by prostration and dyspnoea. The spleen reached 3 cm. below the ribs. Before death, four weeks after re-admission, there was coffee-ground vomiting with bleeding from the bowel. No autopsy was obtained. Blood examination showed a range in hæmoglobin from 59 to 14 per cent.; erythrocytes 2,000,000 to 1,020,000; leucocytes, 6200 to 55,500; myelocytes from 63 to 68 per cent. The case will be reported later in detail.

A paper on "**Spleno-Medullary Leukæmia in Childhood**" was read by Dr. HOWARD T. KARSNER. Leukæmia was not described in children until sixteen years after the original papers of Virchow and Hughes-Bennett. Even then the distinction between the two forms was not recognised and only in recent years has the difference been well brought out. Only eight cases of the spleno-medullary type were found in literature, which cases were given in full. Dr. Karsner then reported a case on which he had performed the autopsy. Beside the leukæmia there was decided rachitis, with the appearance of large numbers of giant-cells in the bone-marrow. The conclusions drawn were as follows: That spleno-medullary leukæmia in childhood is a rare condition; that it becomes more common or less rare as adult life approaches; that it occurs much more commonly in males than in females; that blood examination shows larger total counts of the leucocytes and that the differential counts show larger percentages of lymphocytes than are found in the adult form of the same disease; further, that the transitional forms of leukæmia are relatively frequent in the early period of life; that the course of the disease is usually rapid and the outcome fatal; and that the leukæmias of childhood as well as those of adult life present very definite pathological features, both grossly and histologically, by which competent examination can determine the diagnosis with accuracy.

Dr. W. T. LONGCOPE said that it was probable that in the cases of so-called mixed leukæmia the large mononuclear cells or large lymphocytes were in reality early, non-granulated myelocytes or pro-myelocytes. It has been definitely established through the work of Opie, Jochmann, Müller and others that the polymorphonuclear leucocytes and neutrophilic granular myelocytes contain a ferment which is capable of digesting proteids. Biologically, therefore, these cells have a property which differentiates them sharply from the small lymphocytes which contain no proteolytic ferment. In studying a case of so-called acute lymphatic leukæmia Dr. Donhauser and Dr. Longcope found that the large lymphocytes contained a proteolytic ferment exactly like that in the granular myelocytes and polymorphonuclear leucocytes, and therefore these cells must be considered biologically as myelocytes.

Congenital Imperforate Rectum.—Dr. J. H. JOPSON reported two cases of operation for imperforate rectum. The first patient was a boy, aged $2\frac{1}{2}$ days, in whom the anus and lower portion of the rectum were well formed, but from whom no bowel movement had been obtained. The abdomen was distended and vomiting occurred repeatedly. Left iliac colostomy was performed and the entire sigmoid and colon were found to be imperforate. The lower part of the small intestine was sutured in the wound, opened at once, and inspissated meconium washed out. There was some faecal discharge following operation, but death occurred eight hours afterward. The condition was evidently incompatible with life. In the second case, a boy aged 24 hours, there was imperforation of both anus and rectum. A perinæal incision under chloroform anæsthesia failed to reach the bowel at the depth of two inches. Colostomy was performed at once and the distended sigmoid opened. The child recovered from the operation and was alive two weeks later, but death occurred subsequently from lack of proper food, as the parents were poor and ignorant and the proper artificial food was not obtained. Dr. Jopson has operated on five cases of imperforate anus and rectum, with a mortality of 40 per cent. There was another death, occurring in a case in which the rectum communicated with the bladder and

could not be reached by perinæal operation. This child also succumbed after colostomy. Two of these cases are alive and well. In one the rectal pouch was very close to the perinæum and operation was simple; in the other it was reached at a depth of an inch and a half from the perinæum. Dr. Jopson recommended operation at the earliest possible moment, and if the bowel could not be reached within two inches of the perinæum, immediate colostomy is indicated.

Pelvic Abscess due to Ruptured Empyema.—Dr. R. B. WALKER, by invitation, reported this case.

Dr. JOPSON said that the case was a very unusual and interesting one. While infection frequently travels upward through the diaphragm—sub-phrenic abscess for example—it rarely travels downward. Many cases of empyema are seen in which the collection of pus finds spontaneous exit through a bronchus or by pointing on the chest-wall in the neighbourhood of the nipple; but very seldom will it take a downward direction as in this case.

Reports of Societies.

BRITISH MEDICAL ASSOCIATION.

PATHOLOGICAL SECTION OF THE BIRMINGHAM BRANCH.

October the 29th, 1909.

Specimens of Congenital Heart Disease.—Dr. SAWYER showed three specimens of congenital disease of the heart in children dying at the age of $5\frac{1}{2}$ months, 3 months, and 15 months respectively. Each specimen had a defect in the interventricular septum in the pars membranacea. The first specimen had only this congenital defect of the heart, but there was a slight degree of hypertrophic stenosis of the pylorus with dilatation of the stomach and thickening of its walls. The second specimen had also a small opening in the foramen ovale and a patent ductus arteriosus which would just admit a small probe. In the third specimen, in addition to the defect in the interventricular septum, there was stenosis of the pulmonary orifice and also of the pulmonary artery. In the first two cases a systolic murmur was heard all over the præcordia, and the point of maximum intensity of the murmur was just internal to the left nipple. In the third case the murmur was loudest over the third left costal cartilage, and obviously due to pulmonary stenosis on account of the other physical signs present. Dr. Sawyer suggested that when the murmur in congenital heart disease was heard loudest in the third and fourth left spaces just internal to the nipple, it was probably due to a defect in the interventricular septum. He considered that this was a more common form of congenital malformation of the heart than was generally thought. Cyanosis was absent in the first two patients, but was very marked in the third case, in which there was pulmonary stenosis in addition to the defect in the interventricular septum. These

facts were mentioned in support of the view that the cyanosis of congenital heart disease was due to the impossibility of a sufficient amount of venous blood getting to the lungs for its sufficient oxygenation, and not due to the mixing of the venous and arterial blood, which must have been present in all the three patients.

Dr. EMANUEL pointed out that there were two forms of cyanosis which occurred in congenital heart disease. The one was associated with cardiac failure, while the other was characteristic of certain forms of cardiac malformation and was not due to the congestion which occurred in the first class.

The specimens were also discussed by Dr. DOUGLAS STANLEY, Dr. G. H. MELSON, Mr. NUTHALL, and Mr. LEEDHAM GREEN, and opinions were expressed as to the prognosis in the various forms of congenital heart disease.

BIRMINGHAM UNIVERSITY MEDICAL SOCIETY.

November the 10th, 1909.

A. Case of Acute Anterior Poliomyelitis.—Dr. STANLEY BARNES showed a boy, aged 4 years, suffering from acute anterior poliomyelitis. Five weeks previously the boy had become unwell, complaining of pains in various parts of the body, but chiefly in the back in the lumbar region. When seen ten days later by Dr. Stanley Barnes, the pain in the back was so severe that the child could only be moved about with great difficulty. The lower part of the back was held rigid, and was curved with the concavity looking backwards. The child could not at that time sit up. The knee-jerks were absent and there was an extensor plantar reflex on each side. On account of the extreme rigidity of the back, the great pain, and the extensor plantar reflex, a diagnosis of spinal caries with involvement of the cord in the lumbar region was first made. It soon became apparent that this diagnosis was wrong, and that the case was one of acute anterior poliomyelitis. The extensor plantar reflex was probably due to the inflammatory process in the anterior horn-cells involving also the neighbouring pyramidal tract to a slight extent. The patient gradually improved while in hospital, and the condition present on November the 10th was as follows. All the pain had disappeared, there was a flaccid paralysis of the legs, more marked on the left side, and there was paralysis of the muscles of the anterior abdominal wall below the umbilicus. The knee-jerks were present and had returned ten days previously. There was an extensor plantar reflex on the left side only and not on the right. The child could sit up in bed and could raise the legs, but was quite unable to walk. The chief interest of the case was the difficulty in the diagnosis in the early stages of the disease, on account of the unusual amount of pain, the slight degree of paralysis, and the extensor plantar reflex.

The case was discussed by Dr. MELSON, Dr. SAWYER, and Mr. BILLINGTON.

Abstracts from Current Literature.

Medicine.

Urinary infection in children (*Pediatrics*, 1909, p. 543).—**J. Zahorsky** thinks that urinary infection in children has not received sufficient attention. In the Mississippi Valley it is very common, and ranks next to respiratory and gastro-enteric infections in importance. It is usually overlooked or mistaken for malaria, septicæmia, pneumonia, or influenza. Bacterial invasion may take place through the urethra or rectum. Only rarely can an exact anatomical diagnosis be made from the clinical symptoms. Zahorsky met with three clinical varieties. The first is a febrile form with or without urinary symptoms. It may be mistaken for malaria or typhoid. Though the temperature may be very high, there is an absence of any great systemic depression. The second form is characterised by malnutrition, and is often a sequel of the first. The third is characterised by incontinence of urine. Relapses are frequent. Hexamethylenamine in large doses for a few days is the best drug. Of 42 cases 3 were males, 39 females; 1 died; 6 were under six months old, 9 occurred from the sixth to the twelfth month, 15 in the second year. The oldest patient was aged 9 years. Digestive disturbance accompanied and preceded twelve attacks. The length of the disease, as measured by the pus in the urine, was from five days to eight months.

J. D. ROLLESTON.

Chylous ascites in an infant (*New York State Journ. of Med.*, 1909, p. 14).—**Le Grand Kerr**.—Chylous ascites is very rare, especially in children. The ætiology is obscure. The diagnosis can only be made by the character of the fluid withdrawn. The present case is the youngest on record. A boy, aged 16 days, showing signs of congenital syphilis, was admitted to hospital with a greatly enlarged abdomen and swollen scrotum. Fifteen ounces of milky fluid with all the characteristics of chyle were withdrawn from the scrotum on admission, and another eight ounces five days later. A third puncture, at which twelve ounces were removed, was made at the end of another week. A double inguinal hernia subsequently developed, but became reducible in a few days. When seen two months later the child was improving.

J. D. ROLLESTON.

Incomplete heterotaxy (*Arch of Pediat.*, 1908, p. 881).—**B. F. Royer** and **J. D. Wilson**.—A boy, aged $6\frac{1}{2}$ years, died suddenly in convalescence from varicella twenty-four days after the onset of scarlet fever. Complete transposition of all the abdominal organs was found. The greater portion of the liver was on the left. Five spleens were found on the right side in relation to the lower four ribs, diaphragm, right supra-renal and right kidney. The stomach lay almost entirely on the right side. The cæcum and appendix were in the left iliac fossa. The heart was not transposed, but the left ventricle was abnormally small. The aorta and stenosed pulmonary artery both arose from the right ventricle. The other cardiac lesions were patent foramen ovale, incomplete ventricular septum, and mitral stenosis. The left lung was the largest and consisted of three lobes. The œsophagus entered the stomach to the right of the middle line. The relations of the vagi to the œsophagus were completely changed. The right recurrent laryngeal wound round the arch of the aorta. The vena azygos major was found

on the left side. The thoracic duct ran between it and the aorta, and entered the junction of the right internal jugular and subclavian veins.

J. D. ROLLESTON.

Infantilism of Lorain type (*'Arch. of Pediat.,'* 1908, p. 932).—**A. Hymanson** records a case in a boy, aged 15 years, whose family history was negative. Development was normal till the age of 6 years, when he had a very mild attack of measles. At fifteen his height was $3\frac{1}{2}$ ft. and his weight 41 lb. as compared with the normal $5\frac{1}{4}$ ft. and $110\frac{1}{2}$ lb. The chest was covered with adipose tissue. Axillary and pubic hair was absent and the genitals infantile. Intelligence was good. No improvement followed thyroid treatment. X rays showed no backwardness of ossification in the carpal bones. Infantilism has been classified by Meige into (a) myxœdematous type due to a defective or abnormal function of the thyroid gland; development and ossification are arrested, and there is a long persistence of a juvenile state of body and mind; (b) Lorain type due to defective arterial development. This may be associated with congenital syphilis, tuberculosis, alcoholism and various infectious diseases. The stunted growth is due to premature, not to defective ossification. Thyroid treatment is of no value in the Lorain type, but is indicated in the myxœdematous.

J. D. ROLLESTON.

Measles in nurslings (*'Wien. Med. Presse,'* 1909, p. 44).—**B. Sperk** had observed 592 such cases. Children appear to be immune during the first year of life, but become more susceptible as age advances. Breast-fed and hand-fed children do not differ as regards susceptibility to infection and complications. The eruption is often slight in the weakly and cachectic, and may be localised, especially to the region behind the ears. Koplik's spots are a most valuable and constant symptom, and may be present in cases of measles without eruption. The younger the child the less liable are the mucous membranes to be affected. The eruption is often better developed round areas of intertrigo than on the face. The prognosis is worse than in older patients on account of the frequency of respiratory complications, and is particularly grave in tuberculous nurslings.

J. D. ROLLESTON.

Unexpected death in scarlet fever (*'Presse Méd.,'* 1909, p. 137).—**Gouget and Dechaux**.—The possibility of its occurrence should prevent one giving an unreservedly favourable prognosis in even the mildest case. It may take place at any stage of the disease. (1) In fulminating cases of malignant scarlatina before the appearance of the eruption and even before the angina. Diagnosis is then only possible from the knowledge of one or more cases of scarlet fever in the patient's surroundings. (2) On the fourth or fifth day of an ordinary attack, as in a case recorded by the writers in a girl aged 7 years. (3) In convalescence. In all these cases the autopsy is absolutely negative. Hypotheses as to the determining cause of death are unsatisfactory. The personal and family antecedents of the patient should be investigated, and inquiry made as to any alcoholic, syphilitic or tuberculous heredity, and occurrence of other sudden deaths in the family (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1907, pp. 312, 360, and 504).

J. D. ROLLESTON.

Diphtheritic conjunctivitis following measles (*'Arch. de Méd. des Enf.,'* 1909, p. 81).—**Weill and Mouriquand** record five cases, four of

which have already appeared in Langier's thesis, which Weill had inspired (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1908, p. 412). Two varieties are described: (1) A late form, occurring from ten to thirty days after the eruption. Corneal ulceration is frequent, and perforation sometimes results, but fatal cases are rare. Complete recovery occurs in about 30 per cent. Antitoxin has little effect upon the progress of the lesions. (2) An early form which appears at the height of the eruption or during its decline. Corneal ulceration and death invariably result. Antitoxin and other treatment are absolutely unavailing.

J. D. ROLLESTON.

Adenitis in scarlet fever (*Thèses de Paris*, 1908-9, No. 224).—**L. Guyonnet** distinguishes three kinds of adenitis in scarlet fever. (1) Primary adenitis. (2) Secondary adenitis which appears at the same time or a little later than the eruption; it is not peculiar to scarlet fever and is probably due to a naso-pharyngeal infection. (3) Post-scarlatinal adenitis (Schick), which is much the most important and is peculiar to scarlet fever. It is most frequent in the third or fourth week, but may arise in the second or as late as the eighth. Resolution is the rule, suppuration the exception. Its diagnostic importance is considerable in that it may indicate a previous abortive attack of scarlet fever. It may occur as an isolated phenomenon, but it is often associated with other symptoms, the most frequent and important of which is nephritis, less commonly endocarditis, rheumatoid pains, and in rare cases a relapse may accompany it. Whether it is due to the primary disease or to secondary infection must remain undecided as long as the bacteriology of scarlet fever is uncertain. The thesis contains the histories of sixteen cases, nearly all of which are original.

J. D. ROLLESTON.

Treatment of cerebro-spinal meningitis (*Arch. of Ped.*, 1908, p. 756).—**C. H. Dunn** used Flexner's serum in forty cases. Injections were made into the cerebro-spinal canal. The routine dose was 30 c.c. repeated daily till the symptoms were relieved. The minimum dose was 10 c.c., the maximum 45 c.c.; 31 recovered, a mortality of 22.5 per cent. Only two had sequelæ, one being deaf, and one blind and deaf. Dunn thinks that the serum is of great value, that it aborts the disease, frequently relieves the symptoms, lessens the liability to sequelæ, and greatly reduces the mortality. Early injection is important.

J. D. ROLLESTON.

Meningococcus hydrocephalus (*Arch. of Ped.*, 1908, p. 761).—**J. H. M. Knox** and **F. J. Sladen** review the literature and record two cases of this condition; the first was a boy, aged 5 months, in whom death took place four months after the onset; the other was a boy, aged 6 months, in whom enlargement of the head and intra-cranial pressure at first suggested a tumour. One hundred and twenty cubic centimetres of straw-coloured fluid were obtained by puncture of the ventricle, and chronic internal hydrocephalus of congenital origin was diagnosed. Examination of the fluid, however, showed numerous meningococci. Some improvement followed the use of Flexner's serum, but death occurred suddenly, probably from a sudden increase in the intra-ventricular pressure.

J. D. ROLLESTON.

Length of interval between feedings (*Arch. of Ped.*, 1908, p. 781).—**C. G. Grulee** thinks that a four-hourly interval between feedings for infants has the following advantages: (1) It allows the stomach a rest

between the feeds and thus checks certain cases of vomiting; (2) it renders possible the antiseptic action of the free hydrochloric acid; (3) it allows the child longer periods of rest between the feeds; (4) it prevents over-feeding; (5) it saves the mother or nurse.

J. D. ROLLESTON.

Otitis media in varicella ('*Rev. Hebd. de Laryng.*,' 1909, p. 65).—**M. Jacod** thinks that the aural complications of varicella are much more frequent than is supposed. He distinguishes the early otitis which is due to the spread of bucco-pharyngeal inflammation by the Eustachian tube from late otitis which is an aural localisation of a general infection, and is always associated with secondary infection of the skin. He records five cases of the early variety, three of which occurred in children with large tonsils and adenoids, and four cases of late otitis, all of which occurred in weakly children. Late otitis is more serious than the early variety and is of longer duration. As a rule the aural lesions of varicella are milder than those of scarlet fever or diphtheria. The mastoid cells are rarely affected. Like **Moy** (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1907, p. 455), Jacod insists on the importance of prophylactic treatment.

J. D. ROLLESTON.

Tuberculin tests in young children ('*Arch. of Pediat.*,' 1909, p. 1).—**L. Emmett Holt** reports upon one thousand tuberculin tests in children, the majority of whom were under two years. The ophthalmic test was made 615 times. For the first half of the tests a 1 per cent. solution was used, for the latter half $\frac{1}{2}$ per cent. Of thirty-eight cases in which tuberculosis was certain either from the autopsy or from the presence of tubercle bacilli in the sputum, twenty-five gave a positive reaction. Ten who were dying or suffering from extreme prostration gave a negative and three a doubtful reaction. Of twenty-one in whom tuberculosis was probable, nineteen gave a positive, two a doubtful reaction. Of 555 who had probably not tuberculosis, 546 gave a negative, two a positive, and seven a doubtful reaction. In 12 per cent. the reaction lasted longer than three days, but in none did serious results ensue. Von Pirquet's skin test was employed 217 times. Of twenty-two cases in whom tuberculosis was certain twelve gave a positive, ten a negative reaction. Nine of the latter were moribund or prostrate. Of 172 in whom tuberculosis was probably not present 166 gave a negative and six a positive reaction. In thirty-eight cases a subcutaneous injection of $\frac{1}{100}$ mgr. of tuberculin was given (puncture reaction). All these patients were submitted previously or subsequently to Von Pirquet's reaction, and the results were the same with each test. Intra-muscular injection of tuberculin in doses of $\frac{1}{2}$ mgr. for infants under six months and 1 mgr. for older children was used 130 times (fever reaction). Of twenty-eight cases in which tuberculosis was certain, twenty-two gave a positive, two a negative, and four a doubtful reaction. Of twenty-one in whom tuberculosis was probable, eighteen gave a positive and three a negative reaction. Of eighty in whom tuberculosis was improbable, seventy-eight gave a negative, one a positive, and one a doubtful reaction. Holt thinks that the skin test is the best since it entails no local discomfort, no general reaction and no complications. The possible dangers of the eye-test render its use inadvisable among out-patients. The fever reaction may produce severe constitutional symptoms, and may possibly light up a latent process. None of these tests are as absolutely conclusive as the presence of the tubercle bacillus in the sputum or cerebro-spinal fluid, and though they furnish strong

probability of the existence of a tuberculous lesion, they do not enable one to distinguish between a latent and an active condition.

J. D. ROLLESTON.

A case of chloroma (*'St. Thomas's Hospital Reports,' 1907.*)—**Herbert C. Squires** reports a case of chloroma in a girl, aged 6 years. There was pain in the right ear three weeks before admission to St. Thomas's Hospital. Ten days later the eyes "began to swell," and shortly after this the right side of the face became paralysed. On admission masses were felt over both zygomata, and various groups of glands were slightly enlarged. The differential white counts showed—twelfth day of illness: white cells, 32,886; colour index, 1·2; F.G.Os., 5·2 per cent.; small lymphocytes, 47·7 per cent.; large lymphocytes, 38·8 per cent. Twenty-ninth day of illness: white cells, 62,700; colour index, 0·8; F.G.Os., 7·4 per cent.; small lymphocytes, 10·6 per cent.; large lymphocytes, 69·8 per cent. Exophthalmos became more marked. There was very great œdema of the ocular conjunctiva, the eyelids themselves became swollen, and the corneæ practically sloughed off. Death occurred on the fifty-ninth day of the illness. Patient was a Jewess, and no post-mortem examination could be obtained.

JAMES E. H. SAWYER (Birmingham).

A case of plastic bronchitis (*'St. Thomas's Hospital Reports,' 1907.*)—**Herbert C. Squires** reports the case of plastic bronchitis in a child, aged 4 years. The patient was admitted to St. Thomas's Hospital with a five days' history of dyspnoea. There appeared to be marked laryngeal obstruction, and two doses of diphtheria antitoxin, 14,000 units in all, were given. On the second day after admission an extensive bronchial and bronchiolitic cast was coughed up, but though symptoms were somewhat relieved for the time the child's condition was extremely precarious for several days. A second cast, even more extensive, was coughed up three days after the first. The child then improved, but appeared neither cheerful nor well even on discharge. The throat was examined for diphtheria bacilli on two occasions with negative results. Sections of the casts showed organisms which were mainly cocci though a few bacilli were present. Ten days after discharge, *i. e.* six weeks from onset of illness, the child was readmitted with strabismus, paralysis of accommodation, and absent knee-jerks.

JAMES E. H. SAWYER (Birmingham).

A case of lymphæmia (*'St. Thomas's Hospital Reports,' 1907.*)—**Herbert C. Squires** reports a case of lymphæmia in a child, aged 2 years and 10 months. For one month the child had appeared drowsy and had been sweating profusely. Violent epistaxis occurred seven days before admission, and after this the child appeared to become very ill. There was vomiting for four days only. On admission to St. Thomas's Hospital the child was very pale, with well-marked petechial eruption and blood-stained discharge from the nose. The liver and spleen were readily palpable. Blood-count: red cells, 1,190,625; hæmoglobin, under 10 per cent.; colour index, 0·4; white cells, 2620; of these F.G.Os. 2 per cent., small lymphocytes 80·75 per cent., and large lymphocytes 16·75 per cent. No nucleated red cells were seen. Death occurred three days after admission. At the post-mortem examination there was an excess of hæmolymp glands; numerous hæmorrhages. There was a mononuclear infiltration of the organs.

JAMES E. H. SAWYER (Birmingham).

Acute yellow atrophy in a boy, aged 11 years ('*St. Thomas's Hospital Reports*,' 1907).—**Herbert C. Squires**.—The boy was treated in the out-patient department of St. Thomas's Hospital for what was considered to be catarrhal jaundice from August 26. Vomiting commenced on September 9, and diarrhoea on September 14. He was admitted as an in-patient on September 17, when the liver was found to be enlarged. The gall-bladder was explored next day, and was found to be normal. Death September 19. At the post-mortem examination there were found various hæmorrhages. The liver surface was wrinkled, and necrosis of the hepatic substance was well marked. Fatty changes were slight. The kidney showed degenerative and fatty changes in the tubular epithelium. The pancreas contained areas of necrosis.

JAMES E. H. SAWYER (Birmingham).

Toxæmic jaundice in a girl, aged 1 year and 10 months ('*St. Thomas's Hospital Reports*,' 1907).—**Herbert C. Squires**.—Measles commenced on August 14, and jaundice was first noticed on September 3. Vomiting commenced on September 10, and diarrhoea a week later. She was admitted to St. Thomas's Hospital on September 23 in a comatose condition, and died in convulsions an hour later. At the post-mortem examination the liver was found to be yellow, firm, and cirrhotic. There were areas of necrosis and diffuse fatty change. Kidneys: fatty change and necrosis of the tubular epithelium. Liver culture: *B. coli* and *B. proteus*.

JAMES E. H. SAWYER (Birmingham).

Non-rheumatic aortic stenosis in young subjects ('*Lyon Médical*,' January, 1909, No. 5, p. 189).—**L. Gallavardin** has an original paper on this subject, in which he says that there exists in young subjects an aortic stenosis with marked physical signs, which does not exactly correspond with what is known of congenital stenosis and which is neither of arterial origin nor rheumatic in its nature. This kind of stenosis usually exists singly, and when it is accompanied by slight insufficiency it is always markedly predominant. Clinically it is characterised by a very prolonged tolerance; it may, however, be accompanied at a more advanced stage by functional symptoms and disturbances of compensation. In some cases development has been abnormal. The true nature of this affection is problematical. It may be that in some cases it is the result of a congenital lesion tardily developed; but in the majority of instances it appears more plausible to admit the existence of a lesion acquired and slowly developed in infancy or adolescence, of the nature of a subacute or chronic endocarditis, and due to a cause hitherto undefined. From this point of view it may be compared with the mitral stenosis in young subjects described by Duroziez.

VINCENT DICKINSON.

Acute alcoholism in an infant aged 22 months ('*La Clin. Infant.*,' April, 1909, No. 7, p. 201).—**Zuber** and **Cany** reported this case to the Soc. de Pédiat. The child, who was suffering from a slight attack of indigestion, was given in mistake for water 120 c.c. of Kirsch in three doses in the space of two hours and a quarter. When the mistake was perceived syrup of ipecac. was given to promote emesis in teaspoonful doses, but at the third dose, about five minutes after taking the Kirsch, the child could no longer swallow and became insensible. All the muscles were relaxed; there was complete anæsthesia with suppression of corneal and pupillary reflex; respiration 45, regular, pulse 180 or more. A hot bath with cold affusion was administered, and after vomiting consciousness began to return

four or five hours later. Vomiting continued for some time and some convulsive movements of the arms were noticed. The next day the child was quiet but weak, and a certain amount of nervous irritability persisted for several days. Analysis of the Kirsch showed that the infant had imbibed 54 c.c. of absolute alcohol and $5\frac{1}{2}$ mgrm. of hydrocyanic acid. A study of the toxic action of hydrocyanic acid makes it improbable that the symptoms in this case were due to this substance, as the patient had no oppression of breathing and no slowing of the pulse and respiration; they agree rather with the researches of Lesieur (*Journ. de Physiol. et de Path. gen.*, 1906, viii, p. 427) that the characteristic symptom of intoxication by pure alcohol is paralysis, which is constant and attacks both motion and sensation; he also mentions loss of corneal reflex and bloody stools. The mechanism of these symptoms is explained by cellular dehydration. The fatal dose of absolute alcohol is 10 gm. per kilogramme for animals, or three times the dose taken by this patient. The alcohol was principally responsible for the symptoms. The hydrocyanic acid perhaps at the onset added its own and specific action, but either from insufficiency of the dose or a greater tolerance on the part of the child, as is the case with other poisons, it does not seem to have produced any well-marked symptoms. The case must therefore be considered as one of acute accidental alcoholism, the symptoms of which conformed in every way to the most recent experimental researches.

VINCENT DICKINSON.

The food ration in infants (*La Clin. Infant.*, April, 1908, No. 8, p. 232).—Fayolle follows the teaching of M. Variot in this paper. The child should be put to the breast in the first few weeks every two hours except between 11 p.m. and 5 a.m.—that is, nine times daily; then as he begins to take more, *i.e.* between six weeks and two months, every two and a half hours, and after five months every three hours. If the breasts are well developed each should be given alternately, but if lactation is scanty both should be given at each feed. The infant should be left at the breast at least ten minutes. The results of researches show that the majority of authors consider that the gastric capacity increases proportionately to the body-weight, but Zuccarelli (*Thèse de Paris*, 1897) has noticed an almost constant relation between the gastric capacity and the length of the body. This is the opinion also of M. Variot, who says that there is a corresponding increase in the gastric capacity and body-length, both of which grow with remarkable rapidity in the first weeks of life, a rapidity which is never seen subsequently. Admitting (at least after the second month) that the quantity of milk taken per cm. of body-length is almost invariably 15 gm., it follows that by multiplying the height of the infant by this co-efficient the exact quantity of milk that should be taken will have been accurately arrived at.

VINCENT DICKINSON.

Chronic splenomegalic polycythæmia (*The Post-graduate*, March, 1909).—Chace publishes the case of a girl, aged 17 years, with a good family and personal history. Three years previously she had a severe cough, and since this, palpitation, weakness, blueness of lips and fingers. Three months before admission to hospital an epileptiform fit occurred with epistaxis. Four similar attacks followed. On admission she was well nourished, with dusky skin; lips, gums, tongue and conjunctivæ blue; fingers clubbed. No glandular enlargement. Heart forcible and accelerated. Spleen palpable $1\frac{1}{2}$ inches below costal margin. Red blood-cells 7,500,000, white blood-cells 6250, hæmoglobin 112 per cent., polynuclears 74 per cent., lymphocytes 25

per cent., eosinophiles 1 per cent. Systolic blood-pressure 120 mm.; slight albuminuria. Pulse averaged 100. The patient suffered from headaches and indefinite abdominal pains. The convulsions occurred. She did not improve and grew weaker. She was given iodide of potassium and a non-proteid diet. She left the hospital not improved. This is the earliest recorded case of this disease, which generally occurs between the ages of forty and fifty.

J. PORTER PARKINSON.

Cerebro-spinal meningitis and its treatment by Flexner's serum (*L'Echo Med. du Nord*, March, 1909).—**Grysez**.—There has always been difficulty in growing the organism of this disease outside the body. Flexner has shown that this is not due to the weakening of the medium nor to the accumulation of its products of excretion. He adds to the nutritive medium a quarter of its volume of a microbial extract, produced by the action of toluol or saline solution to retard the development of the organism. Flexner finds that the germ is very susceptible to changes of temperature, and dies easily when this ranges much below that of the human body, or when the microbes are in very large numbers. He considers its fragility is due to the presence of an autolytic ferment contained within itself. Flexner has studied the disease by inoculation of the ape by lumbar puncture, thus producing a disease similar to that in the human subject. Flexner prepared his serum by injections of live cultures under the skin of horses, and later into the veins; this was followed by injections of autolysins. The serum was then used on the human subject and with immediate success: the mortality was reduced from 75 to 90 per cent. to 20 to 43 per cent. in various epidemics. Age has a great effect on the result of the treatment, as shown by this table:

	Cases.	Percentage mortality.
Under 1 year	22	50
1-2 years	19	42
2-5 „	68	23
5-10 „	79	11.4
10-20 „	105	23.8
Over 20	87	26.4
Age unknown	12	46

The mortality is much less the earlier the treatment:

Day of first injection.	Percentage mortality.
1-3	14.9
4-7	22
After 7 days	39

The effect is rapid, the temperature falls the first day, headache is relieved, stupor lessens, consciousness reappears. Stiffness of the neck and Kernig's sign persist for some time. The serum is injected by lumbar puncture, after as much as possible of the cerebro-spinal fluid has been withdrawn. Twenty to thirty c.c. is used in ordinary cases and 40-45 c.c. in grave cases. The dose is repeated daily.

J. PORTER PARKINSON.

Tetany (*Med. Press*, April 7, 1909).—At the Gesellschaft der Aertze of Vienna **Spier** showed a girl, aged 10 years, who had suffered for eight years with recurring tetany. She had been breast-fed and had learnt to walk by the ninth or tenth month. The forehead was prominent, but there were no special signs of rickets. The lens was cloudy and the teeth were

hypoplastic. Gently striking the facial muscles easily produced a contraction of the orbicularis oris muscle, and if the arm were tied or pressure applied to the brachial plexus the contractions were immediately produced. If electric stimuli or galvanic irritation were applied to the left side of the head near the eye, cloudy rays could be seen running from the periphery of the lens towards the centre, while in the right lens a number of fine punctiform specks, varying in size, were observed to radiate from the margin. The hypoplasia of the teeth, due to trophic disturbance, was especially marked in the upper and lower incisors and pre-molars. The hair also suffered from trophic changes, being split at the ends into points (trichorrhexis). All these morbid changes seem to have some connection in tetany with the function of the epithelial bodies in the thyroid. The nails, however, were remarkably healthy and perfectly normal. Taking into consideration all the peculiarities of the case, Spieler described it as being of a parathyreopriva pathogenesis which had produced the tetany noxa.

T. R. WHIPHAM.

Pneumo-thorax in a child, aged 2 years (*'Arch of Pediat.,'* February, 1908).—Huber reports a case in which pneumo-thorax occurred suddenly in a boy, aged 2 years. Except for measles and pneumonia during his first year, the child had been healthy until a fortnight before admission to hospital. He was then suddenly attacked with vomiting accompanied by a high temperature, but apparently recovered and was well for nearly a week. He then suffered from severe cough and vomiting with much dyspnoea and a slight rise of temperature, but had no cyanosis. When seen there were evident signs of pneumo-thorax on the left side. The child made a good recovery without surgical treatment. Several examinations of the sputum failed to reveal the presence of tubercle bacilli, but the pleuritic fluid was not bacteriologically examined.

T. R. WHIPHAM.

On the therapeutics of whooping-cough (*'Allg. Wiener medicin. Zeitung,'* February 2, 1909).—Czerny regards whooping-cough, like pneumonia, as a clinical entity only; he believes that many differing micro-organisms are the causes of the disease, and thinks this explains the varying nature of the epidemics one meets with in practice. The intensity of the cough is independent of the intensity of the disease; it is greater in children of neuropathic families, and it is the nervous system that requires treatment rather than that of the air-passages. It is insufficiently known that whooping-cough can be successfully treated by psychical methods. From this point of view it is a great mistake to isolate a number of children suffering from this disease in various forms in one ward as is done in hospital. This method is disastrous to all the children. The child must be isolated from others, and care is required on the part of the attendants not to appear too anxious. Change of air is often beneficial just as it is in other nervous conditions. Many of the drugs, like quinine, and treatment like hydrotherapy and inhalations, act by suggestion; this is the explanation of their diverse results. Suggestion must be adapted to the understanding of the child and is most successful with the older children; narcotics should only be used in urgent cases.

M. D. EDER.

Cholangitis in a suckling (*'Wien. klin. Rundschau,'* April 4, 1909).—Goldreich showed to the Pediatric Section a baby, aged 4 months, who had jaundice since the fourth day after birth. The jaundice of the skin and

sclerotics was marked. The liver and spleen were swollen. No suggestion of syphilis. Since the infant had been under observation the intensity of the jaundice had somewhat diminished, as had the volume of the spleen and liver, and the biliary pigments had disappeared from the urine. He regarded it as a case exactly analogous to that of catarrhal jaundice of later life, and believed that in this infant it had originated in the intestinal canal. The disease was extremely rare in sucklings.

M. D. EDER.

Achondroplasia, with report of a case by George C. Waiss (*Amer. Journ. of Obstetrics*, June, 1908).—**Waiss** considers "this rare form of dwarfism, of ancient origin, has not been given the prominence the condition warrants." This the writer attributes to the fact that the majority of cases are stillborn or survive but a short time. The usual characteristics were presented by the foetus, which was delivered by forceps traction after a protracted labour. There is no further addition to our knowledge given in this report.

J. HOWELL EVANS.

Pathology.

Cases of general tuberculosis (*St. Thomas's Hospital Reports*, 1907).—**Herbert C. Squires** summarises 28 cases of general tuberculosis as follows. Two of these were over twenty years of age. Tubercles were present as follows in the various organs: lungs in 28 cases, spleen in 26, liver in 21, meninges in 19, kidneys in 18, on the pleuræ in 4, peritoneum in 3, pericardium in 3. Additional foci of tuberculous disease: caseous tuberculous glands were recorded in every case except three; in two of these none could be found and in the third no statement was made; old-standing lung disease 3, brain 4, tonsil 2, heart 2. Extension from bronchial glands to the lung occurred in five cases. Four of these were on the left side and three were in the left lower lobe. Endocarditis was present in two cases—one of these was probably a definite tuberculous endocarditis (see *Proceedings of the Royal Society of Medicine*, 1908). The original focus of the disease appeared to be: thoracic glands 21, glands (probably thoracic) 1, lungs 2, abdomen 1, mesenteric or thoracic glands 1, intestinal ulceration 1, meninges 1. In the last two cases there was no naked-eye evidence of tuberculous disease of the glands. The cerebro-spinal fluid was examined cytologically after lumbar puncture in twelve cases of meningitis. The cells were mainly small lymphocytes in five cases, and in the remainder—

F.G.Os. per cent.	Small lymphocytes per cent.	Large lymphocytes per cent.	
18	58	—	No visible meningitis post-mortem.
44	40	2	Fluid clear.
46	38	13	" "
59	26	5	Fluid slightly turbid.
62	15	15	Fluid sterile.
79	6	2	—
Large numbers	—	—	—

JAMES E. H. SAWYER (Birmingham).

The supra-renal capsules and rickets (*La Pediat.*, March, 1909, No. 3, p. 195).—**A. Jovane** and **C. Pace** performed a number of experiments, showing that the injection into rachitic children of 1 in 1000 solution of

adrenalin in doses of $\frac{1}{10}$ to 1 c.c. produced increase of muscular tone and appetite and improvement in nutrition. Histological examination of the supra-renals of rabbits affected with rachitiform osseous lesions failed to show any changes analogous to those observed in the supra-renals of rachitic infants. Bilateral capsulectomy in puppies proved fatal in twenty-four hours. Unilateral capsulectomy did not produce any histological change in the bones except a vaso-dilatation of the capillaries of the medullary spaces. The experiments tend to show that there is no relation between the supra-renals and rickets from an anatomical point of view, but whether there is any chemical or biological relation remains to be proved.

VINCENT DICKINSON.

The pathology of "growing pains" (*Gaz. Méd. de Paris*, April, 1909, No. 34, p. 5).—**P. Coudray** finds in these cases a diminution of the mineral elements of the urine and an excess of uric acid in relation to urea. These pains have nothing to do with growth, and are observed in children or young adults who present a defective balance of nutrition and are the offspring of arthritic parents. They are, therefore, under the direct influence of arthritism, and are probably due to congestive conditions taking place in the bulbar zone of the bones, *i. e.* in that part of the diaphysis bordering on the interarticular cartilage.

VINCENT DICKINSON.

Twenty-eight cases of idiocy with necropsy (*L'Echo Méd.*, May, 1909).—**Raviart** and **Cannae** report from the Asile d'aliénés d'Armentières: Meningitic idiocy, fourteen cases. In these there was thickening and adherence of the meninges; in addition in some portions of the brain were absent or atrophic, such as the frontal lobes, corpus callosum, etc. Meningocephalic idiocy, eleven cases: In all of these the meninges were thickened and adherent; in some cases there was also cerebral softening. Wassermann reaction was positive in five of these cases and negative in one case, in the others it is not mentioned. Simple arrest of development, three cases: One had microcephaly and one great simplicity of the convolutions. Idiocy symptomatic of atrophic sclerosis, three cases. Microcephalic idiocy, three cases: In two Wassermann reaction was negative, in one positive. Porencephalic idiocy, two cases: Wassermann reaction positive in both. They were both hemiplegics. Hydrocephalic idiocy, three cases, in two of which Wassermann reaction was positive. There was one case of absence of corpus callosum and congenital malformations; one of so-called hypertrophy of the brain, the brain weighing 1810 grm. [the weight of the normal adult brain is 1323 grm.]; and one of myxoedematous idiocy. Wassermann's reaction succeeded in 47 per cent. of the cases, showing that syphilis plays a high rôle in the ætiology of idiocy.

J. PORTER PARKINSON.

Therapeutics.

The treatment of convulsions of gastro-intestinal origin in bottle-fed infants (*La Clin. Infant.*, April, 1909, No. 8, p. 256).—These convulsions are afebrile and take the form of repeated short convulsive seizures lasting several days. (1) The infant should be at once placed on water diet for twenty-four to forty-eight hours, giving a soup-spoonful every half hour of pure water, such as Vittel or Alet. (2) Morning and evening a purgative enema is given consisting of senna leaves 10 grm., water 150 grm., infused for half an hour and filtered. (3) Half an hour after the action a sedative

enema; bromide of potash 0.60 grm., hydrate of chloral 0.60 grm., water 100 grm. (4) Every three hours a lime bath at 36° for twenty minutes. (5) Injections of 50 grm. of Quinton's plasma. (6) After two days, if the attacks are less or have disappeared, asses' milk in teaspoonfuls may be tried.

VINCENT DICKINSON.

Treatment of impetiginous eczema by dressings of nitrate of silver (*La Clin. Infant.*, May, 1909, No. 10, p. 317).—**Deguy**, author of a work on '*La thérapeutique vénérienne*,' demonstrates the excellent results of this method. He cites the case of a child, aged 6 years, who since the age of 2 years had been treated for obstinate attacks of eczema. A fresh attack of slight eczema broke out on the face and scalp, of which not much notice was taken at first, but owing to scratching four or five pustules of impetigo occurred on the forehead. The usual treatment was prescribed, but forty-eight hours later a severe confluent impetiginous eczema spread over the scalp, forehead, ears and part of the face; then ulcerating pustules developed on the thigh, leg and forearm, and conjunctivitis with much œdema of eyelids supervened. Wet dressings of nitrate of silver, 1 in 250, were applied. In forty-eight hours the crusts and pustules had disappeared. The same dressing was subsequently applied to each fresh pustule and in ten days a complete cure was obtained, leaving a black discoloration which soon disappeared.

VINCENT DICKINSON.

The principles of treatment of scoliosis (*Journ. de Med. de Bordeaux*, May, 1909).—**Fraikin** and **de Cardinal** consider that scoliosis may be completely cured if taken at the commencement, but when secondary curvatures appear complete cure is less frequent. When there are grave deformities of the thorax one can only hope to arrest its further evolution. When suspension reduces the deformity the prognosis is good. Massage and vibratory electric massage are highly recommended to diminish muscular tonus and improve nutrition and lessen adhesions; it should be practised on the muscles of the flanks, neck, abdomen, and lateral thoracic regions for five minutes before the gymnastic exercises, which should be rhythmic and progressive, each variety of scoliosis having those exercises most appropriate to itself. This should be followed by a cold douche and percussion over the spine if there are no cardiac or pulmonary troubles. Corsets are useless in the slighter cases, but are useful as a support in the severer ones merely to maintain a good position. They have no curative effect and to some extent cause muscular atrophy and embarrassment of the breathing; they should then not be tight or heavy. The gymnastics should be practised from half to one hour daily according to the age and strength of the patient. As a rule several months of treatment are necessary.

J. PORTER PARKINSON.

Pilocarpine in the laryngeal obstruction of measles (*Giorn. Intern. d. Sci. Med. Naples*, 1908, xxx, 310).—**A. Montefusco**.—A new method of treating the severe laryngeal obstruction occurring in measles: Pilocarpine nitrate in 1 mg. doses, subcutaneously injected and repeated if necessary almost always gives relief. In four years Montefusco has treated forty-five cases with only two deaths, which in his opinion were due to pneumonia. Over 26 per cent. is the usual mortality under the ordinary methods of treatment, *i. e.* tracheotomy or intubation; these latter have never been necessary in the cases recorded.

GEORGE N. BIGGS.

Otology, Laryngology, and Rhinology.

Tracheotomy in slight respiratory obstruction associated with febrile toxæmia (*'Lancet,' January 26, 1907*).—**Bisson** points out that these cases are commonest in septic scarlatina, and now and then in variola. The indications for tracheotomy in this type of case are: (1) *Difficult breathing*, due to pressure from œdema and acute inflammation of the cervical subcutaneous tissue, with marked lymphadenitis. The obstruction is usually extremely light, but it is its duration which tells, especially on the heart strain. (2) *Restlessness*. (3) *Recession*. (4) *Heart strain*. (5) *Pulsus paradoxus*. (6) *Facial lividity*. (7) *Septic laryngitis*. After tracheotomy the improvement is remarkable. It is better to operate under a local anæsthesia. A high and rapid tracheotomy with a small incision is recommended. Prognosis is less favourable in children under three.

MACLEOD YEARSLEY.

Foreign bodies in the nose giving rise to empyema of the maxillary antrum (*'Zeitsch. f. Ohrenheilk.,' vol. LIV, pt. 2*).—**Krebs** points out that the fact that foreign bodies in the nose may give rise to accessory sinus disease is not generally recognised. Among the cases he describes is one of a girl, aged 11 years, in whom a baby's india-rubber teat was found, encrusted, and bathed in foul, viscid pus, in the right nasal fossa. The right maxillary antrum was found to be full of pus, but the parents refused to allow any operation and the child was still suffering when Krebs saw her six years later.

MACLEOD YEARSLEY.

The treatment of hypertrophy of the faucial and pharyngeal tonsils (*'Medical Bulletin,' December, 1907*).—**Gleason**, of Philadelphia, deprecates removal of adenoids when there is good nasal respiration, or when there is only occasional obstruction to nasal respiration from swelling of the third tonsil due to the result of a coryza. In such cases he advises breathing exercises. When the growths are not large they should be painted with iodine by the surgeon two or three times a week, and the parents should cleanse the nose night and morning with an atomiser containing an alkaline wash, and then place in the nostrils a piece of gallic acid ointment (1 to 2 per cent.) while the child lies on its back. When the hypertrophy is great he operates, but avoids chloroform. [Perusal of the above gives the impression that the suggested "treatment" is far more troublesome and decidedly more unpleasant to the patient than simple removal.]

MACLEOD YEARSLEY.

Modern methods of treating infective conditions of the throat (*'Lancet,' March 28, 1908*).—**Meredith Young** has a most important and original paper which emphasises the great importance of treating the throat in infective conditions. Considering that scarlet fever is analogous to diphtheria in its pathology, there being a local bacterial factory in the throat from which toxin is distributed throughout the system to produce the secondary manifestations of the disease—lymphadenitis, nephritis, otitis, etc.—he has made careful tests as to the influence of antiseptic treatment of the throat upon the number of bacteria therein. The experiments consisted in the examination of swabs taken from the fauces before and after various forms of treatment. The latter comprised gargling, douching,

swabbing, and antiseptic lozenges. Briefly, his results were excellent. Of gargles, boric acid is to be absolutely condemned. Swabbing and douching appear to be far more efficient than gargling and of antiseptic lozenges; the value of "Formamint" is strongly emphasised. Young considers that the use of these tablets has prevented the development of septic conditions and their consequences, and quotes the following figures in support of his opinion :

	<i>Cases in which Formamint was not used.</i>		<i>Cases in which Formamint was used.</i>	
	No. of cases.	Percentage occurrence.	No. of cases.	Percentage occurrence.
Number examined	300	—	100	—
Cases in which otorrhœa occurred . .	60	20·0	7	7
" " rhinorrhœa occurred	68	22·6	10	10
" " cervical lymphadenitis occurred	34	11·3	8	8
Cases complicated by rheumatism . .	26	8·6	3	3

Young's paper requires perusal in the original to properly appreciate it.

MACLEOD YEARSLEY.

Adenoids and adenoid tuberculosis (*Amer. Journ. of Med. Sci.,* vol. cxxxiv, No. 2).—**Hamilton White** says that primary tuberculosis occurs in a certain proportion of all cases of adenoids. From the figures of other observers, and his own, this proportion seems to be about 5 per cent., and this is regarded as a conservative estimate. In determining the presence of adenoid tuberculosis the histological method is the most satisfactory. White does not consider tuberculosis to be an important factor in the production of adenoid hypertrophy, but adenoids and tonsils are the important channels of infection in tuberculosis of the cervical glands. In the development of pulmonary tuberculosis adenoids may sometimes be direct channels of infection, but their importance is probably more often indirect by predisposing to catarrhal inflammations of the upper respiratory tract.

MACLEOD YEARSLEY.

On the behaviour of the three resistances of the red blood-corpuscles in adenoid subjects (*Archiv Ital. di Otologia, etc.,* November, 1907).—**Enrico Tormene**.—There is a preliminary note by way of contribution to the hæmatology and pathogenesis of adenoids. No very definite conclusions are drawn from the six cases observed. Tormene divides the red blood-corpuscles into three groups according to their resistance—maximum, medium, and minimal. In all his advanced cases there was increase of the maximum resistance, and this continued for not less than six weeks after the removal of the growths, when it gradually sank to normal. The other resistances were too variously affected for any conclusion to be drawn. The author suggests that, as in certain morbid states (*e.g.* icterus), a substance possessing a katatonic action is found in the blood, there may be in adenoid subjects a substance with hæmo-anatonic action which will affect certain groups of red corpuscles in an opposite sense to the action of the katatonic agents. In a future work Tormene hopes to definitely answer the following questions: Whence do the serums of these adenoids derive their increased potentiality? and Whence comes the anatonistic agent that acts on the corpuscles of maximum resistance?

MACLEOD YEARSLEY.

Rare case of primary acute latent diphtheria of the middle ear (*Annal. di Laringol.,* January, 1908).—**Cozzolino** records the very un-

common and remarkable case of primary diphtheria of the middle ear of a female child, aged $2\frac{1}{2}$ years, cured by repeated injections of antitoxin.

MACLEOD YEARSLEY.

Pneumococcal otitis media (*West London Med. Journ.*, April, 1908).

—**Bowen** writes an important paper on this subject. He states that the most favourable source for investigation of the typical pneumococcus is the pus from the pleural cavity in cases of empyema. Films and cultures must be taken from the auditory meatus within the first week, when there is a steady flow of pus outwards; after it begins to become stagnant an infection takes place from outside. Over one hundred cases were investigated in the three stages of childhood: (1) Pre-adenoid stage, up to eighteen months old; (2) adenoid stage; (3) post-adenoid stage, over fourteen years of age. The pneumococcus is the pathogenic organism found in all cases of acute middle-ear suppuration. It may, in rare cases, infect the ear externally or through the blood-stream, but usually does so *via* the Eustachian tube. Bowen states that the pneumococcus is found in the saliva, the crypts of the tonsil, the nose and naso-pharynx in health; and it is generally some disturbing influence, such as a catarrh, or an operation for adenoids, or a submucous resection, which turns this simple organism into one of parasitic activity. Surgeons should, therefore, be most careful even in the simplest operations on the throat and nose to avoid shock, etc. Another explanation for otitis media in young children in the pre-adenoid stage is the habitual use of "comforters," which are often septic. The treatment for this form is to cleanse the mouth with glycerine and boric acid. The pneumococcus may limit its pyogenic action to the middle ear, or may attack the antrum and mastoid cells. The early diagnosis of this state is important, and such signs as a rise of temperature, profuse discharge, disturbed general condition, and pain or tenderness on pressure must be considered. The treatment is to open up the cells freely and to procure good drainage until the virulence of the organism has been exhausted.

MACLEOD YEARSLEY.

Delayed speech in children (*Edinburgh Med. Journ.*, 1907, p. 1506).

—**Syme** points out that after the first six months the child murmurs unintelligible words. He begins to talk at one year, making himself well understood at eighteen months. Speech may be delayed until after two years; if after four years the prognosis is bad. In the first years adenoids influence speech by the deafness which they cause; if the child is mute at thirteen or fourteen years Guye's aprosexia or a cerebral cause must be considered.

MACLEOD YEARSLEY.

Acute suppuration of the middle ear; septic meningitis; cerebral abscess; radical operation; death (*Journ. of Laryngology*, November, 1907).

—**Syme** records the case of a boy, aged 14 years, who had suffered from otorrhoea for one week in the left and for two days in the right ear. No symptoms suggested cerebral complication. Antiseptic treatment gave temporary amelioration, but a relapse was met by a radical operation. Extensive antral inflammation, with granulations extending from the attic, was found. The lateral sinus appeared healthy. A second operation was done three days later. Signs of thrombosis of the jugular appeared and death ensued three days after. Death appeared due to septic meningitis and necrosis. It would seem that lumbar puncture would have been useful both diagnostically and therapeutically.

MACLEOD YEARSLEY.

Untoward results from diphtheria antitoxin, with special reference to its relation to asthma (*The Therapeutic Gazette* [Detroit], March 15, 1909).—**H. F. Gillette** concludes that all sera are still in the experimental stage of their usage, and that no one should be used without a well-defined object in view and care as to the absence of contra-indications. A table is given of details of twenty-eight cases in which untoward results followed, and of which fifteen died. Symptoms come on usually within ten minutes of injection, and death, if it occurs, usually happens within one hour, and is due to respiratory failure. The author disclaims any alarmist intention.

MACLEOD YEARSLEY.

Otogenous intra-cranial complications in children; presentation of a case (*New Orleans Med. and Surg. Journ.*, January, 1909).—**Homer Dupuy** considers extension to intra-cranial structures from suppurations in the temporal bone from—(1) perforations through the tegmenta tympani et antri and the sulcus of the lateral sinus; (2) through natural channels, along the facial and auditory nerves, cochlea, and semi-circular canals; (3) through the blood- and lymph-vessels. He points out the vulnerable area of the petro-squamosal suture and the "safety-valve action" of the squamo-mastoid suture. The case is described of a male child, aged 5 years, with lateral sinus thrombosis and extra-dural abscess, who recovered after operation.

MACLEOD YEARSLEY.

An empyema of the antrum in a suckling (*Wien. klin. Rundschau*, April 4, 1909).—**Panzer** showed a suckling, aged 7 months, who had suffered from a swelling on the right side of the face extending from the brow to the chin; the eyelids were closed by the swelling, the conjunctivæ red and cedematous. The nose showed a swelling of the middle turbinate and a quantity of muco-purulent secretion. Puncture of the antrum through the nostril confirmed the diagnosis of this rare disease in infancy. In children this condition is usually very acute—high fever, extreme cedema and unbearable pain—but the prognosis is favourable.

M. D. EDER.

Surgery.

Treatment of umbilical hernia by means of paraffin wax (*Med. Press*, May 19, 1909).—**Burckhardt** states that when an umbilical hernia persists beyond the second year it is likely to become permanent. Treatment by strips of adhesive plaster frequently causes eczema, which, making the child cry, still further raises the intra-abdominal pressure. A pad with an elastic bandage is just as difficult to bear, and must be worn for a long time before the hernia is cured. By injections of paraffin, however, there is a possibility of closing the hernial aperture in the course of a few days. After disinfection of the part, the hernia is raised by two fingers of the left hand and the gut reduced by lateral compression. The right hand then introduces the needle, the tip of which is bent and has its opening on the side opposite to the flexure. It is introduced in such a way that the point is free in the hernial sac. Three to four cm. of paraffin at a temperature of 65° C. are introduced, the pressure of the left hand being at the same time gradually released, so that the hernia feels to be as full as it was before. The part is sprayed with ethyl chloride and the needle withdrawn, and a small gauze pad is strapped over the puncture. A circular plaster bandage kept on for

a week ensures success. There is thus formed within the sac a paraffin cap, which has solidified under the ether and is pressed by the bandage into the shape of a plate, thus completely preventing any further escape of the bowel. The irritation caused leads to inflammatory adhesion at the neck of the sac. On first attempts the mistake is often made of using too much paraffin. The limit to this method is that the neck of the sac must not be more than 1 cm. in diameter; when larger than this several injections will be necessary to form a pad sufficiently large to keep back the bowel, especially if there is diastasis of the linea alba. If any of the paraffin should escape into the abdominal cavity it solidifies quickly and does no harm. Only the so-called "hard" paraffin with a melting-point of 54° C. should be used, and it should be previously sterilised by being boiled in a closed vessel. The syringe and cannula must be kept in almost boiling water before use to prevent solidification before the wax can be injected. Soft paraffin, often mixed with vaseline, is dangerous on account of the liability to embolism and the tendency to be absorbed, when it acts as a foreign body.

T. R. WHIPHAM.

Idiopathic dilatation of the colon (Hirschsprung's disease) (*Surg. Gynec. and Obstet.*, vol. VI).—**Finney** reports the case of a child, aged 9 years, in which a successful result was obtained by first doing a colostomy above the dilatation, which began at the hepatic flexure; then later, when the child was much improved and the colon smaller, making an anastomosis between the ascending colon and the lower part of the sigmoid; and finally, some months afterwards, excising the whole of the dilated colon. The colostomy was left open as a safety-valve until the end, and was then closed. The author, in reviewing the subject, dwells in detail on the various theories put forward as to the causation of the condition. Such are—(1) distension accompanying an abnormally long mesentery, allowing of torsion of the sigmoid. In only a comparatively few cases has this been found to hold. (2) A congenital development as regards both the dilatation and the hypertrophy (Hirschsprung). (3) A colitis, which, becoming chronic, causes distension from abundant gas formation. Colitis, however, is described by most observers as a late manifestation. (4) An increased length of the colon with an exaggeration of its loops. (5) A mechanical obstruction, which many cases have failed to show. (6) A congenital aplasia of the muscular coats above the rectum causing a stagnation of the faecal contents, and followed later by a hypertrophy of the colon with the formation of fibrous tissue, due to toxic irritation. (7) A spastic contraction of the sphincter with fissures—a condition rarely seen. (8) A neuromuscular defect in one segment of the colon with paralysis, similar to phantom tumours. (9) A valve formation of the intestine. **Petrivalsky** (*Langenbeck's Archiv*, Bd. LXXXVI, Heft 2) has made a necropsy on a case of true mega-colon, and came to the conclusion that the whole of the intestinal canal is involved and not merely the colon, both being much shorter than usual. The mesentery was histogenetically weak and lacking in elasticity with consequent dilatation and hypertrophy of the bowel wall. In a case of symptomatic mega-colon due to an abnormally long sigmoid these microscopical changes were not found. **Wagner** (*Surg. Gynec. and Obstet.*, vol. VI) reports a congenital case in a child, aged 2 years, in which there was marked peristalsis. In operating to excise the whole colon he found that the sigmoid was U-shaped and very large and terminated abruptly in a normal rectum, at which point there was a kink. The child died from embolism after thirty-two hours.

T. R. WHIPHAM.

Treatment of tubercular hip-disease (*Internat. Congress on Tuberculosis, September, 1908*).—Some radical changes in the treatment of hip-disease have been recently advocated. **H. A. Wilson**, who is a follower of Lorenz, states that nobody has a right to place a child with hip-disease in bed, for almost invariably its health will fail. He advocates weight-bearing with a short plaster-of-Paris spica to encourage what is called "Nature's cure." Patients are made to walk about without crutches, and activity is encouraged. Weight-bearing is stated to be conducive to the benefits obtained by an outdoor life, and to prevent circulatory stasis, thereby securing the benefits obtained by the hyperæmic method of Bier. It may be objected that pathological dislocation may be thus brought about, but the objection does not hold good, as this condition is the result of muscular action and occurs more often with other methods of treatment. In sixty patients under Wilson's observation the active treatment has produced good results, and the method is applicable both to early cases and to older ones with discharging sinuses. Sunlight, fresh air, and activity, combined with a milk and egg diet, are essential, and the limb is fixed in a position of 20° flexion, 20° abduction, and 50° external rotation. The child is then allowed to be up and about. **Ochsner** (*Illinois Med. Journ., July, 1908*) advocates the use of tuberculin, controlled by the opsonic index, in the treatment of tuberculosis in bones and joints, and advises the injection of bismuth paste. Joints are fixed by means of plaster-of-Paris in a position of equilibrium. If treated by this means the writer is of opinion that the condition can be most satisfactorily and easily managed.

T. R. WHIPHAM.

Appendicitis in children (*La Semana Medica, January 7, 1909*).—**Morsaline**, describing the errors that may occur in the diagnosis of appendicitis, relates, among others, the case of a girl suffering from right ovaritis, occurring as a sequel to mumps. There were fever, constipation, vomiting, and extreme pain in the right iliac fossa; a swelling was found around McBurney's point. A surgeon confirmed the diagnosis of appendicitis, but operation was postponed. Iced compresses were ordered but the patient would not continue this treatment, but found most relief from hot applications. Forty-eight hours later the bowels acted, the temperature fell and the patient was better. *Per rectum* a small tumour was found in the right ovarian region. On further inquiry it was ascertained that she had had an attack of mumps a few days before the abdominal complaint occurred. The writer states that nearly all the text-books omit the differential diagnosis between appendicitis and an ovaritis of this nature in girls.

M. D. EDER.

Open safety-pin in the œsophagus of a child, aged 5 months (*Lancet, January 4, 1908*).—**Manson** reports a case of open safety-pin in the œsophagus of a child, the position of which was demonstrated by means of a skiagram, which showed the pin was lying with the point uppermost; as it seemed impossible to remove it, it was pushed down into the stomach. Milk diet was given and a dose of castor oil four days after admission. Six and a quarter days later the pin was found protruding from the anus. [This is the class of case in which Brunings' instruments for the direct examination of the trachea and œsophagus are of such great value, and in all probability the pin could have been removed by means of them without having recourse to the somewhat dangerous plan of relying on the alimentary canal to safely deal with the foreign body.]

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